SOUTHERN PACIFIC COMPANY

(PACIFIC LINES)

TIME TABLE

FOR THE

TUCSON DIVISION

116

Effective Sunday, July 8, 1945, at 12:01 A. M.

MOUNTAIN STANDARD TIME

For the government and information of employes only.

J. W. CORBETT,
General Manager.

R. E. HALLAWELL,
H. R. HUGHES,
Assistant General Managers.

G. C. BAKER,
General Superintendent of Transportation.

C. H. GRANT,
Superintendent of Transportation.

G. A. BAYS,
Superintendent.

WELLTON SUBDIVISION

	EASTWARD											Time Table No. 116		WESTWARD							
Capacity of sidings in car lengths	SECOND CLASS				FIRST CLASS						Distance from San Francisco	July 8, 1945	Distance from Phoenix Yard	FIRST CLASS							
	846	**902**	**844**	**842**	**2**	**372**	**6**	**4**	**370**	**44**				**5**	**43**	**371**	**1**	**373**	**3**		
	Freight	Freight	Freight	Freight	Sunset Limited		Argonaut	Golden State Limited		Californian				Argonaut	Californian		Sunset Limited		Golden State Limited		
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily		**STATIONS**		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily		
Yuma Yd. BKWOTYP	4.50 PM	1.30 PM	8.20 AM	1.10 AM	5.40 PM	11.15 AM	4.30 AM	4.00 AM	2.30 AM	2.00 AM	732.7	TO-R **YUMA** D.T.	174.2	s 2.45 AM	s 4.35 AM	5.55 AM	s 12.35 PM	8.05 PM	s 2.00 AM		
P	5.05	1.45	8.35	1.23	5.51	11.26	4.41	4.11	2.41	2.11	737.4 737.5	E. 3.9 — W. 3.9 TO-R **EAST YARD**	169.5	2.35	4.25	5.45	12.23	7.54	1.48		
62 P	5.10	1.50	8.40	1.28	5.56	11.31	4.46	**4.16**	2.46	2.16	740.1	E. 3.1 — W. 3.7 **ARABY**	166.9	2.30	**4.16**	5.38	12.19	7.49	1.43		
70 P	5.16	1.56	8.46	**1.38**	6.01	11.36	4.51	4.21	2.51	**2.21**	743.7	E. 3.7 — W. 3.8 **FORTUNA**	163.3	**2.21**	4.07	5.33	12.13	7.44	**1.38**		
62 P	5.21	2.01	8.51	1.46	6.06	11.41	4.56	4.26	2.56	2.26	746.6	E. 2.8 — W. 2.7 TO **BLAISDELL**	160.4	2.12	4.03	5.28	12.08	7.39	1.33		
113 P	5.28	2.08	8.58	1.53	6.11	11.46	5.01	4.31	3.01	2.31	750.6	E. 3.9 — W. 4.4 **KINTER**	156.4	2.06	3.57	5.23	12.02 PM	7.33	1.27		
M 76 P	5.34	2.14	9.04	1.59	6.16	11.51 AM	f 5.06	4.36	3.06	2.36	753.5	E. 3.2 — W. 3.0 TO **DOME** D.T.	153.5	2.01	f 3.51	5.17	11.57 AM	7.27	1.22		
68 WIP	6.05 PM	2.55	9.35 AM	2.30 AM	f 6.37	12.12 PM	s 5.27 AM	4.57	**3.28**	2.57	770.0	E.16.1 — W.16.0 TO **WELLTON**	137.0	1.40 AM	f **3.28**	4.55	11.35	7.05	1.00		
72 P		3.07			6.44	12.19		5.04	3.35	3.04	775.7	E. 5.9 — W. 6.0 **MING**	131.3		3.18	4.45	11.23	6.58	12.53		
73 P		3.17			**6.50**	12.25		5.10	3.41	**3.10**	780.9	E. 5.3 — W. 5.3 **ROLL**	126.1		f **3.10**	4.37	11.15	**6.50**	12.48		
73 P		3.37			7.05	12.39		5.24	3.55	3.24	793.2	E.12.1 — W. 12.1 TO **GROWLER**	113.8		2.50	4.21	11.00	6.27	12.32		
76 P		3.55			7.16	12.50		5.35	**4.06**	3.35	802.5	E. 9.4 — W. 9.4 **KOFA**	104.5		2.38	**4.06**	10.48	6.15	12.21		
73 P		4.15			7.29	1.03		5.48	4.18	**3.48**	812.7	E. 10.2 — W. 10.2 **HORN**	94.3		2.26	**3.48**	10.34	6.03	12.09 AM		
75 WOP		4.40			f 7.48	1.22		f 6.07	4.37	f 4.07	822.3	E. 9.7 — W 9.7 TO **HYDER**	84.7		f 2.13	3.34	f 10.20	5.50	11.55 PM		
73 P		4.55			8.01	1.35		6.20	4.50	4.20	831.1	A. B. S. E. 8.8 — W. 8.8 **MONTEZUMA**	75.9		1.54	3.22	10.00	5.32	11.38		
76 WP		**5.20**			8.12	1.46		6.31	5.01	4.31	841.1	E. 9.9 — W. 9.9 TO **SADDLE**	65.9		1.42	3.10	9.48	**5.20**	11.26		
72 P		5.51			8.30	2.05		6.48	5.20	4.48	851.0	E. 10.0 — W. 10.0 **GILLESPIE**	56.0		1.30	2.58	9.34	5.08	11.14		
76 P		6.15			8.42	2.17		7.00	5.32	5.00	861.3	E. 10.1 — W. 10.2 TO **ARLINGTON**	45.7		1.18	2.45	9.20	4.55	11.02		
72 P		6.30			8.48	2.23		7.06	5.38	5.06	865.7	E. 4.5 — W. 4.5 **DIXIE**	41.3		1.12	2.39	9.13	4.49	10.56		
72 P		6.45			8.55	2.30		7.13	5.45	5.13	871.5	E. 5.9 — W. 5.9 **CONGER**	35.5		1.05	2.30	9.05	4.40	10.49		
76 WP		7.10			f 9.02	2.35		7.20	5.50	5.20	875.7	E. 4.0 — W. 4.0 TO **BUCKEYE**	31.3		s 12.58	2.25	f 8.57	4.35	10.43		
72 P		7.22			9.10	2.42		7.28	5.57	5.28	881.7	E. 6.0 — W. 6.0 **LIBERTY**	25.3		12.47	2.17	8.46	4.27	10.35		
74 YP		7.38			f 9.22	2.52		7.40	6.07	5.40	889.7	E. 8.2 — W. 8.2 TO **LITCHFIELD**	17.3		f 12.35	2.07	f 8.36	4.17	10.23		
100 P		7.46			9.27	2.56		7.45	6.11	5.45	893.0	E. 3.1 — W. 3.3 **CASHION**	14.0		f 12.27	2.02	8.25	4.12	10.15		
73 P		7.57			9.34	3.03		7.52	6.18	5.52	898.1	E. 5.2 — W. 5.0 **FOWLER**	8.9		12.20	1.55	8.12	4.05	10.09		
Phoenix Yard 75 P		8.10			9.42	3.11		**8.00**	6.26	6.00	904.0	E. 5.7 — W. 5.7 **23rd AVE. PHOENIX**	3.0		12.13	1.48	**8.00**	3.58	10.03		
											905.5	E. 2.1 — W. 1.3 **CROSSING-AT&SF WYE**	1.5								
BKWP					s 9.50 PM	3.20 PM		s 8.08 AM	6.35 AM	s 6.08 AM	906.0	E. 0.5 — W. 0.5 TO-R **PHOENIX** D.T.	1.0		12.05 AM	1.40 AM	7.50 AM	3.50 PM	9.55 PM		
BKWOTYP		8.20 PM									907.0	E. 1.4 — W. 1.4 TO-R **PHOENIX YARD**	0.0								
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily		(174.2)		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily		
	(1.15) 29.84	(6.50) 25.49	(1.15) 29.84	(1.20) 27.90	(4.10) 41.56	(4.05) 42.66	(0.57) 39.17	(4.08) 41.90	(4.05) 42.66	(4.08) 41.90		Time over District Average Speed per Hour		(1.05) 35.97	(4.30) 38.49	(4.15) 40.75	(4.45) 36.46	(4.15) 40.75	(4.05) 42.66		

See page 3 for additional schedules between Phoenix and Phoenix Yard.

RULE 5. Schedule time and train orders for eastward trains at East Yard will apply at end of double track.

ADDITIONAL STATIONS

NAME	Mile Post	Capacity
Granite Spur. . . . (Spur)	755.2	19
Ligurta. . . . . "	760.2	10
Tyson. . . . . "	788.3	31
Harqua. . . . . "	849.4	4
Crag. . . . . "	856.0	39
Hassayampa. . . . "	867.6	12
Palo Verde. . . . . "	870.2	10
Norton.	884.9	. .
Tolleson.	895.7	. .
Campo.	902.0	. .

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
44	Buckeye, Litchfield	Receive	Phoenix	Colton or San Diego
4	Buckeye, Litchfield	Receive	East of El Paso	

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
3	Litchfield, Buckeye, Hyder	Rec., Dis. Rev.	San Diego or Colton	El Paso
1	Tolleson	Rec., Dis. Rev.	Any Station	Any Station

PICACHO SUBDIVISION

	EASTWARD											Time Table No. 116		WESTWARD					
	SECOND CLASS				FIRST CLASS									FIRST CLASS					
Capacity of sidings in car lengths	904	856	854	852	2	372	4	6	370	44	Distance from San Francisco	July 8, 1945	Distance from Tucson	1	373	3	5	43	371
	Freight	Freight	Freight	Freight	Sunset Limited		Golden State Limited	Argonaut		Californian				Sunset Limited		Golden State Limited	Argonaut	Californian	
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily		**STATIONS**		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily
Phoenix Yard BKWP					10.15 PM	3.50 PM	8.35 AM		7.15 AM	6.35 AM	906.0	TO-R **PHOENIX** D.T. E. 1.4 — W. 1.4	120.9	s 7.25 AM	3.35 PM	s 9.30 PM		s 11.40 PM	1.10 AM
Phoenix Yard BKWO TYP	8.00 PM				10.20	3.55	8.40		**7.20**	6.40	907.0	TO-R **PHOENIX YARD** D.T. E. 3.6 — W. 3.9	119.9	**7.20**	3.30	9.25		11.33	1.01
P	8.12				10.27	4.02	8.47		7.28	6.48	911.1	**KENDALL** E. 3.3 — W. 3.8	115.8	7.11	3.20	9.20		11.22	12.53
79 YP	8.22				f 10.33	4.12	f 8.57		7.38	f **7.03**	914.4	TO **TEMPE** E. 1.0 — W. 0.2	112.5	f **7.03**	3.12	s 9.12		s 11.14	12.45
P											915.3	**TEMPE JCT.** E. 1.8 — W. 1.8	111.6						
P											917.1	**NORMAL JCT.** E. 3.9 — W. 4.7	109.8						
Yard Limits 78 WYP	**8.57**				s 10.47	4.14	s 9.14		7.53	s 7.17	921.8	TO **MESA** E. 2.1 — W. 2.1	105.1	s 6.47	2.52	s **8.57**		s 11.00	12.25
81 P	9.10				**10.51**	4.19	9.18		8.00	7.22	923.6	**McQUEEN** E. 6.0 — W. 5.9	103.3	6.39	2.45	8.52		**10.51**	12.11
80 P	9.30				s 11.01	4.29	s 9.29		8.15	f 7.32	929.3	TO **CHANDLER** E. 5.0 — W. 5.0	97.6	f 6.28	2.33	f 8.42		s 10.34	12.01 AM
76 P	9.40				11.10	4.37	9.38		8.27	7.41	934.3	**SERAPE** E. 4.5 — W. 4.4	92.6	6.16	2.22	8.29		10.21	11.51 PM
67 P	9.50				11.16	4.43	9.44		8.33	7.47	939.0	**SANTAN** E. 4.3 — W. 4.3	87.9	6.11	2.16	8.23		10.15	11.46
67 P	**10.09**				11.21	4.48	9.49		8.38	7.52	943.2	TO **DOCK** E. 10.0 — W. 10.0	83.7	6.06	2.11	8.18		**10.09**	11.41
72 P	10.30				**11.33**	5.00	10.01		8.50	8.04	953.2	**BLACKWATER** E. 5.0 — W. 5.4	73.7	5.54	2.00	8.06		9.59	**11.33**
118 P	10.43				11.40	5.06	10.07		8.56	8.10	958.2	**POSTON** E. 3.7 — W. 3.3	68.7	5.48	1.53	8.00		9.51	11.23
73 WP	**11.18**				s 11.52 PM	5.20	s 10.20		9.06	s 8.20	962.0	TO **COOLIDGE** E. 4.6 — W. 4.2	64.9	s 5.43	1.48	s 7.54		s 9.44	**11.18**
32 P											966.4	**RANDOLPH** E. 4.8 — W. 5.1	60.5					f	
67 P	11.33				12.05 AM	5.35	10.35		9.20	8.33	971.4	A. B. S. **TOPAZ** E. 8.7 — W. 9.0	55.5	5.27	1.31	7.37		9.30	11.01
N100 S98 WOIYP	11.48	7.40 PM	11.25 AM	3.25 AM	12.17	5.48	10.47	10.20 AM	9.35	8.45	979.7 936.7	TO **PICACHO** E. 3.7 — W. 3.5	47.2	5.17	1.20	7.28	f 9.10 PM	f 9.20	10.50
72 P	11.58 PM	7.50	11.35	3.35	12.22	5.53	10.52	10.27	9.40	8.50	940.7	**OCATILLA** E. 3.3 — W. 3.5	43.2	5.11	1.13	7.24	9.03	9.13	10.43
90 P	12.07 AM	7.59	11.44	3.44	12.26	5.57	10.56	10.31	9.44	8.54	944.2	TO **WYMOLA** E. 3.8 — W. 3.7	39.7	5.07	1.09	7.20	8.59	9.09	10.39
71 P	12.14	8.06	11.51	3.51	12.30	6.01	11.00	10.35	9.48	8.58	947.9	**MONTROSE** E. 3.3 — W. 3.8	36.0	5.03	1.05	7.16	8.55	9.05	10.34
W84 E87 WP	12.21	8.13	11.58 AM	3.58	12.34	6.05	11.04	10.40	9.52	9.02	951.4	TO **RED ROCK** E. 3.2 — W. 2.7	32.5	4.59	1.01	7.12	8.51	9.01	10.31
67 P	12.26	8.18	12.03 PM	4.03	12.37	6.08	11.07	10.44	9.55	9.05	954.3	**AVRA** E. 2.9 — W. 4.0	29.6	4.56	12.56	7.09	8.46	8.56	10.28
174 YP	**12.41**	**8.30** **8.51**	12.10	4.10	**12.41**	6.12	11.11	f 10.54	10.05	9.10	958.4	TO **NAVISKA** E. 5.1 — W. 4.0	25.5	4.52	12.50	7.05	f **8.40**	**8.51**	10.22
69 P	12.52	8.58	12.16	4.16	12.45	6.18	11.15	11.01	10.12	9.16	962.2	**MARANA** E. 2.2 — W. 2.4	21.7	4.48	12.44	7.01	8.34	8.47	10.14
94 P	12.56	9.03	12.21	4.21	12.48	6.21	11.18	11.04	10.15	9.19	964.6	**PAPAGO** E. 1.6 — W. 2.4	19.3	4.45	12.40	6.58	8.29	8.44	10.10
164 WP	1.01	9.08	12.26	4.26	12.51	6.24	11.21	11.08	10.18	9.22	966.9	TO **RILLITO** E. 3.7 — W. 3.0	17.0	4.42	12.37	6.55	8.26	8.41	10.07
93 P	1.08	9.13	**12.34**	**4.39**	12.55	6.28	11.25	11.12	10.24	9.26	969.9	**SABINO** E. 2.2 — W. 2.1	14.0	**4.39**	**12.34**	6.52	8.23	8.38	10.04
83 P	1.14	9.18	12.41	4.45	12.58	6.31	11.28	11.17	10.27	9.29	972.1	TO **CORTARO** E. 2.6 — W. 2.7	11.8	4.36	12.31	6.50	8.21	8.36	10.01
93 P	1.20	9.23	12.46	4.50	1.01	6.34	11.31	11.20	10.30	9.32	974.7	**KINO** E. 2.7 — W. 3.4	9.2	4.33	12.28	6.47	8.18	8.33	9.58
W83 E88 P	1.26	9.28	12.51	4.55	1.04	**6.44**	11.34	11.24	10.33	9.35	977.4	**JAYNES** E. 4.0 — W. 2.3	6.5	4.30	12.24	**6.44**	8.15	8.30	9.55
P	1.32	9.35	12.56	5.07	1.08	6.52	11.38	11.29	10.38	9.39	981.2	TO **STOCKHAM** D.T. E. 2.7 — W. 2.9	2.7	4.26	12.21	6.41	8.11	8.26	9.51
Tucson Yard BKWCOITYP	1.45 AM	9.50 PM	1.10 PM	5.20 AM	s 1.20 AM	7.05 PM	s 11.50 AM	s 11.40 AM	10.50 AM	s 9.50 AM	983.9	TO-R **TUCSON**	0.0	4.15 AM	12.10 PM	6.30 PM	8.00 PM	8.15 PM	9.40 PM
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily		(120.9)		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily
	(5.45) 20.85	(2.10) 21.78	(1.45) 26.97	(1.55) 24.63	(3.05) 39.21	(3.35) 33.73	(3.15) 37.20	(1.20) 35.40	(3.35) 33.73	(3.15) 37.20		Time over District Average Speed per Hour		(3.10) 38.17	(3.25) 35.34	(3.00) 40.30	(1.10) 40.46	(3.25) 35.34	(3.30) 34.54

RULE 5. Schedule time and train orders for westward trains at Stockham will apply at end of double track.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except: No. 44 and No. 2 are superior to No. 5.

Second main track between east end Phoenix Yard and east switch Kendall, may be used by freight trains when authorized by train order. Single track rules apply.

See page 2 for additional schedules between Phoenix Yard and Phoenix.

ADDITIONAL STATIONS

NAME	Mile Post	Capacity
Tovrea (Spur)	911.1	9
Tremaine	925.4	22
Falfa	926.1	40
Pozo (Spur)	931.0	43
Olberg "	948.1	14
Peak	975.2	..

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or Beyond)	From (or beyond)
44	Red Rock	Discharge Rev.		Phoenix
44	Naviska	Receive, Discharge Rev.	East of Tucson	Phoenix Line Points
6	Red Rock, Marana, Rillito, Cortaro	Receive, Discharge	El Paso	Colton
6	Red Rock (Saturday)	Receive Non-Revenue	Tucson	

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or Beyond)	From (or beyond)
3	Naviska	Discharge Revenue		East of El Paso
5	Cortaro, Rillito, Marana	Receive, Discharge Rev.	Colton	El Paso
43	Red Rock	Receive, Discnarge Rev.	Phoenix	El Paso
43	Red Rock (Saturday)	Discharge Non-Revenue		Tucson

WELLTON SUBDIVISION

	EASTWARD								WESTWARD
	SECOND CLASS			FIRST CLASS			Time Table No. 116 July 8, 1945		FIRST CLASS
Capacity of Sidings in car lengths	846 Freight Leave Daily	844 Freight Leave Daily	842 Freight Leave Daily	6 Argonaut Leave Daily	Distance from San Francisco	A. B. S.	STATIONS	Distance from Gila	5 Argonaut Arrive Daily
68 WIP	6.05PM	9.35AM	2.30AM	5.35AM	770.0	TO	WELLTON } D.T. E. 3.4 — W. 3.4	85.7	f 1.40AM
69 P	6.13	9.43	2.38	5.42	773.1		ASHER E. 3.3 — W. 3.3	82.6	1.34
63 P	6.19	9.49	2.44	5.47	776.4		TACNA E. 3.6 — W. 3.7	79.3	1.30
69 P	6.25	9.56	2.50	f 5.52	780.1		GAEL E. 4.0 — W. 3.9	75.6	f 1.26
63 P	6.31	10.02	2.56	5.57	783.8		COLFRED E. 4.5 — W. 4.6	71.9	1.21
67 P	6.39	10.10	3.04	6.04	788.6		PEMBROKE E. 4.1 — W. 4.2	67.1	1.16
W79 E67 P	6.50	10.20	3.15	f 6.12	792.6	TO	MOHAWK E. 3.4 — W. 3.2	63.1	f 1.12
63 P	6.56	10.26	3.21	6.17	795.9		KIM E. 4.4 — W. 4.6	59.8	1.04
64 P	7.04	10.34	3.29	6.23	800.5		STOVAL E. 5.7 — W. 6.0	55.2	12.58
94 P	7.14	10.44	3.39	f 6.30	806.2		DATELAND E. 5.7 — W. 5.4	49.5	f 12.51
W127 E63 WP	7.24	10.54	3.49	f 6.39	811.9	TO	AZTEC E. 3.8 — W. 4.1	43.8	f 12.42
94 P	7.30	11.00	3.55	6.44	815.8		MUGGINS E. 4.1 — W. 3.8	39.9	12.36
63 P	7.37	11.07	4.02	6.49	819.7		STANWIX E. 2.3 — W. 2.3	36.0	12.31
68 P	7.41	11.11	4.06	6.52	822.0		LAVA E. 3.9 — W. 4.6	33.7	12.28
W76 E72 WOP	8.05	11.35	4.30	s 7.05	826.1	TO	SENTINEL E. 3.7 — W. 3.0	29.6	s 12.14
76 P	8.15	11.45	4.40	7.11	829.6		TRIGO E. 3.7 — W. 3.6	26.1	12.09
61 P	8.22	11.52AM	4.47	7.16	833.1		TARTRON E. 6.9 — W. 6.9	22.6	12.04AM
65 P	8.33	12.03PM	4.58	7.26	839.9	TO	PIEDRA E. 5.4 — W. 5.4	15.8	11.54PM
64 P	8.42	12.12	5.07	7.34	845.5		THEBA E. 4.7 — W. 4.7	10.2	11.46
63 P	8.50	12.20	5.15	7.41	850.3		SMURR E. 5.8 — W. 5.1	5.4	11.39
Yard Limits BKWOTYP	9.00PM	12.30PM	5.25AM	s 7.50AM	855.7	TO-R	GILA	0.0	11.30PM
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily			(85.7)		Leave Daily
	(2.55) 29.38	(2.55) 29.38	(2.55) 29.38	(2.15) 38.09			Time over District Average Speed per Hour		(2.10) 39.55

WELLTON SUBDIVISION

Capacity of Sidings in car lengths	EAST-WARD	Distance from San Francisco		Time Table No. 116 July 8, 1945 Litchfield Branch STATIONS	Distance from Litchfield Park	WEST-WARD
74 YP		889.7	TO	LITCHFIELD 5.0	5.0	
		894.7		LITCHFIELD PARK	0.0	
				(5.0)		

YUMA VALLEY RAILROAD

Capacity of Sidings in Car Lengths	EAST-WARD	Distance from Yuma		Time Table No. 116 July 8, 1945 STATIONS	Distance from Gadsden	WEST-WARD
Yuma Yard P		0.0	TO-R	YUMA 1.0	21.0	
20		1.0		U. S. R. S. 7.5	20.0	
23		8.5		WILLETTS 6.5	12.5	
25		15.0		SOMERTON 6.0	6.0	
		21.0		GADSDEN	0.0	
				(21.0)		

ADDITIONAL STATIONS

NAME	Mile Post	Capacity
Ludy ....(Spur)	3.0	25
Spillway........ "	10.2	8

SPECIAL INSTRUCTIONS

Southern Pacific Company Rules and Regulations of the Transportation Department, Air Brake Rules, and Special Instructions in Tucson Division Time Table govern on Yuma Valley Railroad.

Trains will not exceed speed 15 MPH except must not exceed 8 MPH over trestle at U.S.R.S.

Impaired side clearance at Spillway, MP 10.25.

At Yuma, normal position of junction switch will be for S.P. yard tracks.

RULE 93: Yard limits are established at Yuma.

U.S.R.S. yard, Yuma, and Ludy Spur must not be used.

Track out service and must not be used east of MP 16 (Somerton).

PICACHO SUBDIVISION

	EASTWARD							Time Table No. 116		WESTWARD		
	SECOND CLASS			FIRST CLASS				July 8, 1945		FIRST CLASS		
Capacity of sidings in car lengths	856 Freight	854 Freight	852 Freight		6 Argonaut	Distance from San Francisco		STATIONS	Distance from Picacho	5 Argonaut		
	Leave Daily	Leave Daily	Leave Daily		Leave Daily					Arrive Daily		
Yard Limits BKWOTYP	4.30PM	8.20AM	12.20AM		8.00AM	855.7	A. B. S.	TO-R GILA E. 3.0 — W. 3.7	81.0	s 11.20PM		
62 P	4.39	8.29	12.29		8.07	859.1		COLEDON E. 6.2 — W. 6.3	77.6	11.13		
74 P	4.55	8.45	12.45		8.18	865.1		TO BOSQUE E. 3.9 — W. 3.8	71.6	11.05		
62 P	5.07	8.57	12.57		8.25	869.1		OCAPOS E. 2.6 — W. 2.7	67.6	10.59		
73 P	5.17	9.07	1.07		8.30	871.8		SHAWMUT E. 3.0 — W. 3.0	64.9	10.55		
72 YP	5.30	9.20	1.20		f 8.36	874.6		TO ESTRELLA E. 4.8 — W. 4.7	62.1	f 10.51		
64 P	5.39	9.29	1.29		8.41	879.4		BUCHAN E. 4.0 — W. 4.0	57.3	10.44		
63 P	5.47	9.37	1.37		f 8.46	883.7		MOBILE E. 4.8 — W. 4.8	53.0	f 10.38		
62 P	5.55	9.45	1.45		8.51	888.4		ENID E. 4.3 — W. 4.3	48.3	10.30		
63 P	6.03	9.53	1.53		8.56	892.8		HEATON E. 4.8 — W. 5.6	43.9	10.24		
N 110 S 146 WP	6.25	10.15	2.15		s 9.08	897.8		TO MARICOPA E. 5.5 — W. 4.8	38.9	s 10.17		
61 P	6.35	10.25	2.25		9.18	902.9		LIRIM E. 4.7 — W. 4.7	33.8	10.05		
70 P	6.45	10.33	2.33		9.25	907.7		BON E. 5.0 — W. 5.0	29.0	10.00		
63 P	6.55	10.41	2.41		9.32	912.5		NUNEZ E. 5.9 — W. 6.1	24.2	9.54		
Yard Limits 88 WP	7.07	10.52	2.52		s 9.48	918.8		TO CASA GRANDE E. 5.2 — W. 5.0	17.9	s 9.45		
61 P	7.16	11.01	3.01		9.55	923.7		ARIZOLA E. 4.8 — W. 4.8	13.0	9.32		
63 P	7.24	11.09	3.09		10.02	928.4		TOLTEC E. 4.8 — W. 4.8	8.3	9.26		
74 P	7.32	11.17	3.17		s 10.12	933.1		TO ELOY E. 3.8 — W. 4.1	3.6	s 9.19		
N 100 S 98 WOIYP	7.40PM	11.25AM	3.25AM		f 10.20AM	936.7		TO PICACHO	0.0	9.10PM		
	Arrive Daily	Arrive Daily	Arrive Daily		Arrive Daily			(81.0)		Leave Daily		
	(3.10) 25.58	(3.05) 26.27	(3.05) 26.27		(2.20) 34.71			Time over District Average Speed per Hour		(2.10) 37.38		

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Seco............(Spur)	921.0	13

PICACHO SUBDIVISION

	EASTWARD				Time Table No. 116		WESTWARD	
					July 8, 1945			
Capacity of sidings in car lengths			Distance from San Francisco ↓		Christmas Branch	Distance from Christmas ↑		
					STATIONS			
81 P			923.6		McQUEEN E. 3.6 — W. 3.6	86.9		
72 P			927.0	TO	GILBERT E. 5.2 — W. 4.7	83.5		
26			932.0		HIGLEY E. 3.6 — W. 3.4	78.5		
9			935.6		GERMANN E. 2.4 — W. 2.5	74.9		
18 P			938.1		RITTENHOUSE E. 3.6 — W. 4.0	72.4		
54 P			941.6		QUEEN CREEK E. 8.0 — W. 7.9	68.9		
45 P			949.8		MAGMA E. 9.3 — W. 9.2	60.7		
27 WP			959.0	TO	FLORENCE E. 10.6 — W. 10.1	51.5		
26 P			969.0		PRICE E. 6.2 — W. 6.2	41.5		
26 P			975.2		COCHRAN E. 7.9 — W. 7.9	35.3		
23 P			983.1		ZELLWEGER E. 4.5 — W. 5.0	27.4		
Yd. Limits P			987.8	TO-R	RAY JCT. E. 7.3 — W. 6.8	22.7		
29			994.9		BRANAMAN E. 4.8 — W. 4.8	15.6		
Yard Limits 2			999.7		BURNS E. 0.6 — W. 0.3	10.8		
Yard Limits BKWO YP			1000.2	TO-R	HAYDEN JCT. E. 1.8 — W. 2.0	10.3		
Yard Limits 14 P			1002.1	TO	HAYDEN E. 8.2 — W. 8.3	8.4		
41			1010.5		CHRISTMAS	0.0		
					(86.9)			

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Wooley.........(Spur)	984.6	5
Winkelman..... "	1003.5	8

At Hayden Jct. when train-order office is open, signal governs movement of trains and engines between Christmas Branch junction switch (1584 feet east of Hayden Jct.) and Hayden Jct. train-order office. Movements between these points are authorized by signal being placed in proceed position after being called for by one long, one short and one long sound of whistle. When train-order office is closed, movements may be made between these points "With Caution" if intervening track is seen to be clear.

Normal position Christmas Branch junction switch is for Kennecott Copper Corporation Railroad. Westward trains and engines via Kennecott Copper Corporation Railroad, and via Christmas Branch, must stop to clear Christmas Branch junction switch before proceeding as authorized above.

Kennecott Copper Corp'n R. R. between Hayden Jct. and Hayden Mills is operated by the Tucson Division.

Speed of trains must not exceed 15 MPH.
Grade Hayden Mills to Hayden Jct. 2.2%.
Impaired overhead and side clearance at Hayden Mills Smelter.

RULE 99 must be complied with between Christmas Branch junction switch and Ray Consolidated derail on Kennecott Copper Corporation Railroad.

Between Price and Christmas: Look out for rocks and landslides.

EASTWARD PICACHO SUBDIVISION WESTWARD

Capacity of sidings in car lengths	FIRST CLASS 378 Mexican Express Leave Daily Ex. Sunday	Distance from San Francisco		Time Table No. 116 July 8, 1945 Nogales Branch STATIONS	Distance from Nogales	FIRST CLASS 379 Mexican Express Arrive Daily Ex. Sunday
Tucson Yard BKW COITYP	10.30AM	983.9	TO-R	TUCSON TO-R TUCSON 0.8	65.9	s 4.35PM
				VIA SHOP YARD —E.7.1—W.7.4 T. & N. R. R. JCT. —E.6.7—W.7.0—	65.1	
24		991.6		CONSAIR E.2.0—W.2.4	58.4	
55 P	10.52	993.8		XAVIER E.9.2—W.9.2	56.0	4.13
62 P	f11.07	1002.4		SAHUARITA E.13.3—W.14.3	47.4	s 3.58
56 P	11.31	1016.3		CANOA E.4.8—W.4.8	33.5	3.34
57 WP	s11.41	1021.1	TO	AMADO E.4.5—W.4.5	28.7	s 3.25
56 P	11.49AM	1025.6		CHAVEZ E.8.6—W.8.6	24.2	3.16
57 P	f12.04PM	1034.2		OTERO E.16.0—W.15.4	15.6	f 3.01
Nogales Yard BKWOTP	s12.35PM	1049.8	TO-R	NOGALES	0.0	2.30PM
	Arrive Daily Ex. Sunday			(65.9)		Leave Daily Ex. Sunday
	(2.05) 31.44			Time over District Average Speed per Hour		(2.05) 31.44

No. 378 and No. 379 stop daily at MP 1028.1, and stop on flag at Continental.
Trains must not exceed 15 MPH over highway crossing at Consair.
Rule S-72 Exception, No. 378 is superior to No. 379.
Passenger trains use shop yard route, Tucson yard.
Freight trains use T. & N. R. R. Jct. route, Tucson yard.

ADDITIONAL STATIONS

NAME	Mile Post	Capacity
Continental.....(Spur)	1010.4	12
Morales........ "	1012.1	18
Silva..................	1037.3	
Calabasas.......(Spur)	1040.1	55

EASTWARD PICACHO SUBDIVISION WESTWARD

Capacity of sidings in car lengths	Distance from San Francisco ↓		Time Table No. 116 July 8, 1945 Creamery Branch STATIONS	Distance from Normal Jct. ↑
79 WYP	914.4	TO	TEMPE 1.0	2.1
	915.4		CREAMERY 1.1	1.1
	916.5		NORMAL JCT.	0.0
			(2.1)	

EASTWARD PICACHO SUBDIVISION WESTWARD

Capacity of sidings in car lengths	Distance from San Francisco ↓	Time Table No. 116 July 8, 1945 Tempe Branch STATIONS	Distance from West Chandler ↑
P	915.3	TEMPE JCT. 2.4	7.7
20	917.7	PETERSON 2.4	5.3
48	920.1	HELENA 2.9	2.9
	923.0	WEST CHANDLER	0.0
		(7.7)	

EASTWARD BOWIE SUBDIVISION WESTWARD

Capacity of sidings in car lengths	SECOND CLASS 884 Freight Leave Daily Ex. Monday	FIRST CLASS 382 Motor Leave Daily	Distance from San Francisco		Time Table No. 116 July 8, 1945 Globe Branch STATIONS	Distance from Live Oak	FIRST CLASS 381 Motor Arrive Daily	SECOND CLASS 883 Freight Arrive Daily Ex. Sunday
Yard Limits E-110 W-113 BKWCOYP	8.00AM	**4.35PM**	1098.4 1097.9	TO-R	BOWIE E.9.2—W.9.8	136.4	s 3.05PM	**4.35PM**
50 P	8.25	4.52	1107.4		ESCALA E.10.5—W.10.1	126.9	2.41	4.02
13 P	8.50	f 5.08	1117.8		TANQUE E.7.3—W.7.6	116.5	f 2.22	3.30
42 P	9.05	5.19	1125.1		HAECKEL E.7.7—W.7.7	109.2	2.09	3.10
38 P	9.25	s 5.32	1132.6		SOLOMON E.2.7—W.2.3	101.7	s 1.57	2.50
Yard Limits 52 WP	10.20	s 5.45	1137.5	TO	SAFFORD E.3.1—W.2.9	96.8	s 1.45	2.25
34 P	10.35	s 5.55	1140.6		THATCHER E.5.1—W.5.1	93.7	s **1.33**	**1.33**
28 P	10.55	s 6.06	1145.6	TO	PIMA E.1.1—W.1.5	88.7	s 1.23	1.05
62 P	11.14	6.10	1146.7		DUBLIN E.2.3—W.1.6	87.6	1.19	12.50
59 P	11.45AM	f 6.21	1153.0		CORK E.2.0—W.1.3	81.3	f 1.09	12.25
59 P	**12.03PM**	s 6.34	1159.3	TO	FT. THOMAS E.5.1—W.4.7	75.0	s12.58	**12.03PM**
17 WP	12.18	f 6.43	1164.2		GERONIMO E.5.6—W.6.0	70.1	f12.48	11.50AM
54 P	**12.36**	f 6.54	1170.1		BYLAS E.6.7—W.6.6	64.2	f **12.36**	11.35
52 P	12.57	f 7.06	1176.8		CALVA E.14.3—W.14.3	57.5	f12.24PM	11.20
52 P	1.40	7.34	1191.0		DILI E.6.4—W.5.8	43.3	11.56AM	10.40
52 WP	2.10	s 7.55	1201.0	TO	SAN CARLOS E.7.0—W.6.4	33.2	s11.35	10.10
43 P	2.50	f 8.22	1213.5		CUTTER E.6.1—W.5.9	20.7	f11.11	9.40
Yard Limits BKW OTP	3.20PM	s 8.45PM	1221.5	TO-R	GLOBE E.4.6—W.4.8	12.7	10.50AM	9.10AM
13 P			1226.2		RADIUM E.1.2—W.1.0	8.0		
Yard Limits WYP			1231.9	TO-R	MIAMI E.1.1—W.1.1	2.3		
Yard Limits 27 Spur			1233.0		INSPIRATION JCT. E.1.2—W.1.2	1.2		
Yard Limits 14 Spur			1234.2		LIVE OAK	0.0		
	Arrive Daily Ex. Monday	Arrive Daily			(136.4)		Leave Daily	Leave Daily Ex. Sunday
	(7.20) 16.87	(4.10) 29.69			Time over District Average Speed per Hour		(4.15) 29.11	(7.25) 16.67

No. 381 and No. 382 stop on flag at Peridot.
Between MP 1184 and MP 1196: Look out for rocks and landslides.
All train and engine movements must be preceded by section crew from Inspiration Jct. to Live Oak.

ADDITIONAL STATIONS

NAME	Mile Post	Capacity
Lone Star........(Spur)	1135.3	21
Glenbar...............	1148.9	..
Ashurst...............	1154.8	..
Peridot...............	1197.3	..
Reppy................	1207.8	..
Pinal...........(Spur)	1219.3	12
Burch.......... "	1227.3	3
Claypool....... "	1230.2	9

EASTWARD

BOWIE SUBDIVISION

WESTWARD

Capacity of sidings in car lengths	SECOND CLASS						FIRST CLASS						Distance from San Francisco			Time Table No. 116 July 8, 1945	Distance from Lordsburg	FIRST CLASS	
	866	964	864	962	862	960	376	4	6	370	44	2						43	1
	Freight	Freight	Freight	Freight	Freight	Freight		Golden State Limited	Argonaut		Californian	Sunset Limited						Californian	Sunset Limited
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily				STATIONS		Arrive Daily	Arrive Daily
Tucson yard BKWCO ITYP	5.45 PM	4.05 PM	8.40 AM	7.45 AM	2.00 AM	12.01 AM	11.00 PM	12.15 PM	12.05 PM	11.30 AM	10.15 AM	1.50 AM	983.9	Track No. 2	TO-R	TUCSON E. 0.8 — W. 0.8			
													984.7			T. & N. R. R. JCT. E. 8.7 — W. 9.4			
63 P	6.13	4.40	9.08	8.20	2.28	12.35	11.20	12.35	12.25	11.50 AM	10.35	2.12	993.8			RANKIN E. 9.4 — W. 9.4		Be Governed by Current Time Table and Bulletins of Rio Grande Division.	
63 P	6.35	5.05	9.30	8.45	2.50	1.00	11.37	12.52	f 12.42	12.07 PM	10.52	2.28	1003.3			VAIL E. 9.2 — W. 9.3			
79 WP	6.57	5.40	9.52	9.29	3.12	1.35	11.54 PM	1.09	f 12.59	12.24	11.09	2.46	1012.6			PANTANO E. 11.0 — W. 11.1			
N94 S85 CIYP	7.30	6.20 PM	10.25	10.01 AM	3.45	2.15 AM	12.15 AM	1.30 PM	f 1.20	12.45 PM	11.30 AM	3.03	1023.6	A. B. S.	TO-R	MESCAL E. 4.8 — W. 4.7	124.7	f 6.45 PM	2.50 AM
77 P	7.40		10.35		3.55				1.25			3.10	1028.2			CHAMISO E. 4.4 — W. 4.9	120.1	6.35	2.40
E118 Yd. Lmts. W70 BKWOP	8.00		10.55		4.15				s 1.41			s 3.25	1032.6 1032.5		TO	BENSON E. 3.4 — W. 2.7	115.7	s 6.25	s 2.30
62 P	8.12		11.07		4.27				1.48			3.32	1035.8			FENNER E. 2.5 — W. 2.6	112.5	6.05	2.17
83 P	8.23		11.18		4.38				1.55			3.38	1038.5			CURVO E. 2.7 — W. 2.6	109.8	6.00	2.12
75 WP	8.34		11.29		4.49				2.03			3.45	1041.0		TO	SIBYL E. 2.9 — W. 2.8	107.3	5.54	2.07
63 P	8.43		11.38		4.58				2.09			3.51	1043.9			TULLY E. 3.3 — W. 3.3	104.4	5.48	2.02
63 P	8.52		11.47		5.07				2.16			3.57	1047.3			OCHOA E. 3.8 — W. 3.8	101.0	5.43	1.57
65 P	9.01		11.56 AM		5.16				2.23			4.04	1050.8			LANCHA E. 2.9 — W. 2.9	97.5	5.38	1.52
E65 W65 YP	9.14		12.09 PM		5.29				s 2.31			4.11	1053.9		TO	DRAGOON E. 4.5 — W. 4.7	94.4	f 5.33	f 1.48
81 P	9.24		12.19		5.39				2.37			4.17	1058.3			MANZORO E. 5.2 — W. 5.3	90.0	5.24	1.40
90 P	9.33		12.28		5.48				s 2.46			4.22	1063.9		TO	COCHISE E. 5.9 — W. 5.7	84.4	f 5.15	1.33
64 P	9.42		12.37		5.57				2.53			4.28	1069.6			HADO E. 5.1 — W. 5.2	78.7	5.05	1.24
68 WP	9.51		12.46		6.06				s 3.04			f 4.37	1074.7		TO	WILLCOX E. 4.7 — W. 4.6	73.6	s 4.56	1.15
61 P	10.01		12.56		6.16				3.11			4.44	1079.4			DRURY E. 2.9 — W. 3.2	68.9	4.46	1.08
99 P	10.13		1.08		6.28				3.17			4.50	1082.6		TO	RASO E. 5.3 — W. 4.9	65.7	4.40	1.04
64 P	10.22		1.17		6.37				3.25			4.56	1087.7			ALRICH E. 3.6 — W. 3.6	60.6	4.33	12.58
64 P	10.28		1.23		6.43				3.30			5.00	1091.0			LUZENA E. 3.4 — W. 3.5	57.3	4.27	12.52
63 P	10.34		1.29		6.49				3.35			5.04	1094.5			CHOLLA E. 3.2 — W. 4.8	53.8	4.22	12.47
E110 Yd. Lmts. W113 BKWCOYP	10.55		1.50		7.10				s **3.58**			s 5.15	1098.4		TO-R	BOWIE E. 4.9 — W. 3.3	49.9	s **4.15** **3.58**	s 12.40
64 P	11.04		1.59		7.19				4.05			5.22	1102.6			HOLT E. 4.1 — W. 4.1	45.7	3.53	12.29
63 P	11.11		2.06		7.26				4.10			5.27	1106.6			OLGA E. 3.5 — W. 3.5	41.7	3.48	12.24
63 P	11.18		2.13		7.33				4.15			5.31	1110.2			KARRO E. 3.7 — W. 3.7	38.1	3.44	12.20
BKWCO 63 YP	11.25		2.20		7.40				s 4.20			5.36	1114.2		TO	SAN SIMON E. 3.6 — W. 3.6	34.1	s 3.40	12.16
64 P	11.45 PM		2.34		7.54				4.27			5.40	1117.6			BAWTRY E. 4.4 — W. 4.4	30.7	3.34	12.12
74 P	**12.07 AM**		2.46		8.06				4.33			5.45	1121.8			VANAR E. 3.1 — W. 3.2	26.5	3.29	**12.07**
70 P	12.30		2.55		8.15				4.39			5.51	1125.0			CAVOT E. 3.7 — W. 3.7	23.3	3.24	12.03 AM
E66 W69 YP	12.50		**3.16**		8.35				f 4.51			5.59	1128.9		TO	STEINS E. 3.8 — W. 3.8	19.4	f **3.16**	11.57 PM
62 P	1.00		3.22		8.42				4.56			6.04	1132.7			MONDEL E. 4.1 — W. 4.1	15.6	3.10	11.51
63 P	1.07		3.32		8.49				5.01			6.08	1136.5			CONRAD E. 4.3 — W. 4.3	11.8	3.05	11.46
62 P	1.15		3.40		8.57				f 5.07			6.13	1140.8		TO	GARY E. 3.1 — W. 3.1	7.5	f 3.00	11.41
63 P	1.22		3.45		9.04				5.12			6.17	1143.9			PYRA E. 4.6 — W. 4.0	4.4	2.56	11.37
Yard Limits BKWCOYP	1.35 AM		3.55 PM		9.15 AM				s 5.20 PM			s 6.27 AM	1148.3		TO-R	LORDSBURG	0.0	2.50 PM	11.30 PM
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily				(164.4)		Leave Daily	Leave Daily
	(7.50) 20.98	(2.15) 17.65	(7.15) 22.68	(2.16) 17.51	(7.15) 22.68	(2.14) 17.77	(1.15) 31.76	(1.15) 31.76	(5.15) 31.31	(1.15) 31.76	(1.15) 31.76	(4.37) 35.61				Time over District Average Speed per Hour		(3.55) 31.83	(3.20) 37.41

Westward trains will use track No. 1, Rio Grande Division, Mescal to Tucson, and eastward trains will use track No. 2, Tucson Division, Tucson to Mescal, under double track rules.

ADDITIONAL STATIONS

NAME	Mile Post	Capacity
Polvo..........(Spur)	987.7	4
Wilmot........ "	990.7	13
Esmond..............	998.6	..

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
1	Wilcox, Cochise	Discharge		East of El Paso

SPECIAL INSTRUCTIONS

RULE 2. Watch Inspectors:

S. A. Pope, Manager of Time Service.....65 Market St., San Francisco

Yuma	J. H. Huber
Phoenix	H. H. Howard
Tucson	Grunewald & Adams
Tucson	R. W. Hemkin
Nogales	G. C. Jackson
Lordsburg	E. L. Preis
Globe	J. G. Cubitto
Miami	J. G. Cubitto, Jr.

RULE 2 (A). Watches subject to inspection must be presented to a designated inspector for comparison, and certification on standard watch certificate between the first and fifteenth of each month.

RULES 10 (G) and 10 (H). On tracks No. 1 and No. 2 between Tucson and Polvo, signals will be placed on left of track in direction of movement.

RULE 10 (H). Where yellow signals are displayed within limits of a length of track over which a maximum speed is designated in train order or time-table bulletin and no maximum speed is otherwise specified for the particular section of track protected by these yellow signals, trains must not exceed fifteen miles per hour thereover.

RULE 10 (J). Mile Post location of slow boards which restrict the speed of trains, as indicated on slow board, while engine of such train is passing distant signal three-fourths mile beyond the slow board:

Eastward				Westward		
			YUMA-PHOENIX			
779.3	847.6	873.9		754.7	832.9	877.4
791.4	849.5	879.9		782.8	852.8	883.4
800.7	859.5	888.2		804.2	862.9	891.5
810.9	864.0	891.2		814.4	867.4	894.8
820.6	869.9	896.3		824.1	873.4	899.8
829.4						
			PHOENIX-PICACHO			
909.9	937.2	960.3		912.5	936.2	963.8
927.7	941.2	969.6		931.2	940.6	967.9
932.7	957.8				960.2	973.0
			PICACHO-TUCSON			
939.0	946.0	979.7		964.3	968.9	976.6
942.1	972.8					982.1
			WELLTON-GILA			
791.1	814.1	838.7		772.2	817.7	834.8
.....	818.1	844.1		797.6	821.3	847.1
799.1	827.9	848.7		.....	823.7	851.7
804.7	831.8	853.7		808.2	831.3	
			GILA-PICACHO			
853.7	877.8	905.9		858.2	881.2	904.6
857.2	881.8	911.0		866.9	885.2	909.3
863.6	890.9	916.8		870.5	889.9	914.3
870.2	895.7	922.0		873.4	894.3	920.4
873.1	901.2	926.7		876.4	899.8	925.3
						930.1
			TUCSON-LORDSBURG			
1001.7	1068.0	1135.2		1004.7	1052.4	1126.7
1026.9	1077.9	1139.5		1013.9	1055.3	1130.2
1042.4	1115.9	1142.6		1034.7	1060.0	1134.0
1052.4	1131.1			1037.4	1071.0	1138.1
				1042.6	1092.8	1142.5
						1145.5

Mile Post location of slow board which restricts the speed of trains, as indicated on slow board, while engine of such train is passing the home signal three-fourths mile beyond the slow board:

Eastward			Westward
		TUCSON-LORDSBURG	
1024.4	1070.5		

Slow boards for westward trains at MP 922.82, MP 1041.5 and MP 1045.9 also have lamp attached which displays yellow light at night. This light is to call attention to slow board, and is not a yellow signal referred to in Rule 10 (H).

RULE 14. Other engine whistle signals:
For diverging route, 0 —— 0.
For siding, —— 0 ——.

RULE 14 (d). As specified below, —— —— —— —— 0 sounds of whistle will be indication that flagman may return from west as prescribed by Rule 99:

Phoenix Yard—Kendall, Trains on Second Main Track.
Normal Jct., Trains on Creamery Branch.
Picacho, Trains on Phoenix Line.

RULE 14 (e). As specified below, —— —— —— —— —— —— sounds of whistle will be indication that flagman may return from east as prescribed by Rule 99:

Wellton, Trains on Phoenix Line.
Litchfield, Trains on Litchfield Branch.
Kendall—Phoenix Yard, Trains on Second Main Track.
Tempe, Trains on Creamery Branch.
Tempe Jct., Trains on Tempe Branch.
McQueen, Trains on Christmas Branch.
T. & N. R. R. Jct., Trains on Nogales Branch.
Mescal, Trains on Rio Grande Division.
Bowie, Trains on Globe Branch.

RULE 17. Mars Signal Light on engines shall be used when engine is moving at night, and in foggy or stormy weather. It must be dimmed or extinguished approaching passenger stations, and at other points as prescribed by rules.

RULE 21 (C). At Phoenix, Gila and Tucson, incoming engines may display indicators until arrival at roundhouse.

RULE 28. In double track territory signals will be placed to right of track according to direction of movement of train to be flagged. Trains in opposite direction will not be required to observe signals so placed.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except as shown on Pages 3 and 6.

RULE 83. Identification may be made on double track between Yuma and East Yard; Dome and Wellton; Stockham and Tucson; Phoenix and Phoenix Yard; to be applied at end of double track; and on second main track between Phoenix Yard and Kendall, to be applied at Kendall. Reduce speed sufficiently to permit identification and Rule 14 (k) will apply.

RULE 83 (A). At the following stations, only trains indicated will register:

East Yard—Westward trains entering yard tracks.
Phoenix—First-class trains.

RULE 83 (B). At open train-order offices trains may register by ticket as follows:

East Yard	Westward trains entering yard tracks.
Phoenix Yard	First-class trains
Mescal	All trains
Bowie	All trains except on Globe Branch

Tucson—Engineers of light engines from east will leave register ticket with engine dispatcher for delivery to operator for registration.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
731.51	Yuma	737.83
	" (Yuma Valley R. R.)	0.22
900.96	Phoenix	908.79
920.45	Mesa	922.88
981.96	Tucson (Track No. 2)	989.00
	" (Track No. 1—Rio Grande Div.)	988.09
	" (Nogales Br.)	987.42
1021.24	Mescal (R. G. Div.)	1023.13
1022.89	" (Tucson Div.)	1024.13
854.20	Gila	857.70
917.78	Casa Grande	920.05
986.84	Ray Jct.	988.72
998.80	Hayden Jct.	1004.90
1046.37	Nogales	1049.89
1031.60	Benson	1034.01
1097.10	Bowie	1100.00
	" (Globe Br.)	1099.50
1136.65	Safford	1138.34
1218.70	Globe	1223.22
1229.82	Miami	1234.20
1147.19	Lordsburg	1151.38

RULE 97. Extra trains must not run via Creamery Branch unless train order so specifies.

RULE D-97 (A). Will apply between Phoenix and Phoenix Yard.

RULE 99. First-class trains must move with caution on passenger tracks at Phoenix, and passenger tracks 1, 2 and 3 at Tucson, and trains standing on these tracks need not protect against following first-class trains, but must comply with Rule 99 (A).

RULE 99 (C). Will apply as follows:

Globe Branch between Bowie and Globe;
Christmas Branch between McQueen and Hayden Jct.

RULE 103 (A). A flagman must precede all movements over:

Yuma, 1st, 2nd, 3rd and 4th Sts.
Tovrea, Washington St.
Tempe (Creamery Branch), Mill Ave. and 8th St.
Dateland, U. S. Highway 80.
Naviska, U. S. Highway 84.
Tucson, West Congress St.,
" South 6th Ave.,
" Simpson St.
Nogales, Court and Park Sts.
Globe, Hackney St. and eastward over Murphy St.
Miami, Latham Blvd., Adonis Ave. and Miami Copper Co. highway crossing.

RULE 103 (B). Back-up hose must be used when making back-up movements with cars, between Hayden Jct. and Hayden Mills, and between North and South yards and/or P. F. E. yard, Tucson.

Back-up hose must be used on leading car when shoving cars on Government tracks at Airports at Yuma, Naviska, Higley and Wilmot.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

Phoenix	West end double track, for westward track.
Kendall	Second main track, for first main track.
Picacho	Phoenix line, for Gila line. Operators will handle switches to and from Phoenix line, also for movements through crossovers, and west switches of north and south sidings.
Litchfield	Litchfield Br., for Phoenix line.
Yuma	Yard track on Madison Ave., for YVRR main track.
Magma	Magma-Arizona RR main track, for back track.
McQueen	Christmas Br., for Phoenix line.
Ray Jct	KCCRR main track, for yard track.
Hayden Jct	Christmas line, for KCCRR line.
Tucson	Nogales Br., via Shop Yard, for Track No. 1.
Tempe	Creamery Br., for Phoenix line.
Normal Jct	Creamery Br., for Phoenix line.
Tempe Jct	Tempe Br., for Phoenix line.
Bowie	Globe Br., for Eastward siding.
T&NRR Jct	T&NRR wye track, for Track No. 1.
Benson	Benson-Fairbank Br., for helper lead.

Normal position of west crossover switch from yard track 1 to eastward main track at East Yard, is for tail track.

DERAILS IN MAIN TRACK:

Litchfield Park, 320 feet west of east end of track.
Christmas, 250 feet east of west switch.
Nogales, 221 feet west of west switch, may be trailed through by eastward trains.

RULE 105. Following tracks are designated for use as sidings:

Fowler	Track north of main track.
Mesa	Track south of main track.
Red Rock	Track north of main track, for eastward trains; Track south of main track, for westward trains.
Jaynes	Track north of main track, for westward trains; Track south of main track, for eastward trains.
Mohawk	First track north of main track, for eastward trains; Second track north of main track, for westward trains, and connects with eastward siding at each end.
Aztec	Track north of main track, for westward trains; Track south of main track, for eastward trains.
Sentinel	Track north of main track, for eastward trains; Track south of main track, for westward trains.
San Carlos	Track north of main track, opposite station.
Benson	Track north of main track, for eastward trains; Track south of main track, for westward trains.
Dragoon	Track north of main track, for westward trains; Track south of main track, for eastward trains.

Bowie	Track north of main track from west switch to main track switch just east of station building, for eastward trains; Track north of main track from east switch to main track switch just east of station building, for westward trains.
Steins	First track north of main track, for westward trains; Second track north of main track, for eastward trains, and connects with westward siding at each end.

Abbreviations used for sidings: "E" for Eastward, "W" for Westward, "M" for Middle, "N" for North, "S" for South. Sidings designated as Middle, North or South, may be used by trains in either direction.

RULE 221. First sentence of third paragraph is amended as follows: "When a train order is to be delivered to an approaching train, or orders are held for any other train in the same direction, except those originating, the operator must not clear the signal."

Trains must obtain clearance before leaving Tempe to or from Creamery Branch, and at Bowie and Miami and at Phoenix Yard, except westward trains terminating at Phoenix.

Phoenix is train-order office for first-class trains only.

RULE D-251. Applies to the following tracks:

Westward track, East Yard to Yuma. Extra trains and engines must receive proceed signal from yardman (white flag by day, green light by night) before leaving East Yard, before passing Signal 7341, and before passing Signal 7331.

Both tracks between Phoenix and Phoenix Yard.

Track No. 1 and westward track from PFE yard Tucson, to Stockham. Extra trains and engines must receive proceed signal from yardman (white flag by day, green light by night) before leaving PFE yard, and before passing Park Ave., Signal 9843, and Sixth Ave., but this does not authorize trains or engines to pass Signal 9853 indicating "stop."

RULE 297. Following paragraph is added:

A train, if delayed in the block, must proceed with caution to the next signal.

METHOD OF DISPATCHING TRAINS BETWEEN TUCSON AND MESCAL

Track No. 1 Mescal subdivision and Track No. 2 Bowie subdivision will be operated under double track rules, Track No. 1 westward track and Track No. 2 eastward track.

Limits of double track operation between Tucson and Mescal will be as follows:

Eastward—via Track No. 2 to switch of west end crossover between Tracks No. 2 and No. 1 at Mescal.

Westward—via west end crossover between Tracks No. 2 and No. 1 at Mescal and Track No. 1 from west switch of crossover to Tucson.

RULE D-97 (A) will apply on Tracks No. 1 and No. 2 between Tucson and Mescal, except that extra trains must obtain clearance, or proper train-order signal, or permission from train dispatcher before using either track.

Trains from Bowie Subdivision moving to Mescal Subdivision, and trains on Mescal Subdivision moving through Mescal, with the same conductor and engineer operating through Mescal, may be issued train orders on one subdivision that affect their movements on either, or both subdivisions. Any such train orders issued by one division to a train on the other division must be transmitted to the other division addressed to Dispatcher before complete is given to the order addressed to the train; and such orders must be shown on clearance issued by the division on which train originates.

RULE 82 (A). Regular trains and sections of schedules authorized on Bowie or Mescal Subdivisions are authorized to assume corresponding schedules or sections of schedules on Bowie or Mescal Subdivisions at Mescal without clearance.

Westward trains may leave Mescal without clearance provided train is properly cleared by train-order signal.

RULE 83 (B). When a regular train is checked on Bowie or Mescal Subdivision, it will not be necessary to check the register at Mescal against the same train.

RULE 505. AUTOMATIC BLOCK SYSTEM

Yuma: Eastward freight trains must not pass Signal 7328, and westward trains, except first-class, must not pass Signal 7341 unless proceed signal received from yardman (white flag by day, green light by night).

East Yard: Westward trains entering yard tracks must not pass Signal P-7375 unless proceed signal received from yardman (white flag by day, green light by night).

Phoenix: Crossing—AT&SF Wye: If signal indicates "stop" trains and engines must stop, and if wye is clear of intersecting movement, may then proceed as prescribed by Rules 509(F) or 509(J), but must provide flag protection on intersecting track unless derail is known to be in derailing position.

Phoenix: Main track has no block signal protection between Signal 9059.5 and a point on eastward and westward track opposite Signal 9064. Passenger tracks have no signal protection.

Picacho: Upper unit in Signal 9377 governs movement on main track; Middle unit for north siding; Lower unit for south siding. Signal 9374 will require a two-minute interval to clear after switch on north siding is lined for movement to main track if it is desired to make an eastward movement from north siding ahead of eastward train on main track or eastward train occupying approach circuit on south siding.

Tucson: Passenger tracks 1, 2 and 3 between end of double track at MP 983.66 and Signal 9838 on Track No. 2 have no block signal control.

Westward trains must not pass east crossover switch opposite Signal 9838, just east of Tucson yard office without proceed signal from yardman, (white flag by day, green light by night) unless this switch is lined for movement on Passenger track 1.

Trains and engines finding Signal 9843 indicating "stop" may proceed into passenger tracks 2 or 3 if switches are properly lined and proceed signal from yardman (white flag by day, green light by night) is received, but must move with caution, not exceeding 12 MPH.

Westward freight trains must receive proceed signal from yardman (white flag by day, green light by night) before passing Signal 9875, and at first crossover switch west of Signal 9851.

Eastward freight trains, after passing Sixth Ave. tower, and before entering freight yard, must receive proceed signal from yardman (white flag by day, green light by night).

Tucson-Mescal: Eastward trains on Track No. 2 finding a signal indicating "stop" will apply Rule 509(i). Westward trains moving against current of traffic on Track No. 2 finding a signal indicating "stop" between Mescal and Esmond will apply Rule 509(J); and will have no block signal protection between Esmond and Tucson. Between Tucson and Polvo, automatic signals are on the left of the track in current of traffic direction.

PUSH BUTTONS

Push button and light on side of relay case on Signals P-9376 and P-9378 at Picacho; P-9776 and P-9778 at Jaynes; and P-11245 and P-11247 at Cavot. If practicable, Approach Circuit sign on siding should not be passed if train on main track is to proceed first. When train on main track or siding is to let train on other track proceed first, signal on other track should be cleared by pressing push-button bearing number of the signal on other track until light on relay case appears. Time release will then operate, and requires from two to five minutes for signal to clear. Instructions for operating push buttons are posted on inside of push-button box.

RULE 510. The following block signals equipped with triangular number plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
P- 7372 P- 7374	Spring switch, end double track, East Yard.......	P- 7375
P- 7532	Spring switch, end double track, Dome...........	P- 7535
	Spring switch, east end siding, Pembroke.........	P- 7889
P- 7956	Spring switch, west end siding, Kim..............	
P- 9052	Spring switch, west end passenger lead, Phoenix....	
	Spring switch, east end double track, Phoenix Yard.	P- 9075
P- 9376 P- 9378	Spring switch, east end south siding, Picacho......	P- 9377
	Spring switch east end siding, Ocatilla	P- 9411
	Spring switch east end siding, Wymola	P- 9445
	Spring switch east end eastward siding, Red Rock.	P- 9521
	Spring switch east end siding, Naviska............	P- 9587
	Spring switch east end siding, Rillito.............	P- 9673
	Spring switch east end siding, Cortaro............	P- 9725
P- 9776 P- 9778	Spring switch east end eastward siding, Jaynes.....	P- 9777
P- 9810	Spring switch end double track, Stockham..........	P- 9813
	Spring switch, east end siding, Chamiso...........	P-10287
	Spring switch, east end siding, Curvo.............	P-10389
P-10408	Spring switch, west end siding, Sibyl..............	
	Spring switch, east end siding, Sibyl..............	P-10415
P-11246	Spring switch, west end siding, Cavot..............	P-11245 P-11247
	Spring switch, east end siding, Cavot.............	P-11255
P-11322	Spring switch, west end siding, Mondel............	

RULE 516: Overlap posts:

23rd Ave. Phoenix	Middle of Siding	Eastward trains.
	Middle of Siding	Westward trains.
McQueen	Middle of Siding	Westward trains.
Papago	Middle of Siding	Eastward trains.
	Middle of Siding	Westward trains.
Cortaro	Middle of Siding	Westward trains.
Pembroke	Middle of Siding	Westward trains.
Mondel	Middle of Siding	Eastward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows, and speed indicated must not be exceeded while trailing through the switches:

LOCATION		NORMAL POSITION	MPH Psgr.	MPH Frt.
Yuma	West end bridge, end double track	Westward track	6	6
Yuma	East end bridge, end double track	Eastward track	6	6
East Yard	End double track	Westward track	25	25
Dome	End double track	Eastward track	35	35
Pembroke	East end siding	Main track	25	20
Kim	West end siding	Main track	25	20
Picacho	East end south siding	Main track	25	20
Ocatilla	East end siding	Main track	25	20
Wymola	East end siding	Main track	25	20
Red Rock	East end eastward siding	Main track	25	20
Naviska	East end siding	Main track	25	20
Rillito	East end siding	Main track	25	20
Cortaro	East end siding	Main track	25	20
Jaynes	East end eastward siding	Main track	25	20
Stockham	End double track	Eastward track	35	35
Chamiso	East end siding	Main track	25	20
Curvo	East end siding	Main track	15	15
Sibyl	West end siding	Main track	25	20
Sibyl	East end siding	Main track	25	20
Cavot	West end siding	Main track	25	20
Cavot	East end siding	Main track	25	20
Mondel	West end siding	Main track	25	20

A spring switch with facing point lock must not be trailed through unless switch target displays the letters "SS" in normal position, or switch has been lined for the movement.

Spring switches not equipped with facing point locks are located as follows, and speed indicated must not be exceeded while passing over the switches in facing movement, or in trailing through them:

LOCATION		NORMAL POSITION	MPH Psgr.	MPH Frt.
Phoenix	Main track at passenger lead	Passenger lead	15	15
Phoenix Yard	East end double track	Westward track	15	15

Spring switches are also located on engine lead at Yuma; engine leads at Tucson; on PFE leads in PFE yard, Tucson; and on stem of wye at Estrella, Dragoon, San Simon and Steins, and in main track at Nogales 221 feet west of west switch.

Switch position indicator at spring switch on engine lead, Yuma indicates position of switch points, and does not indicate track occupancy. When indicator displays red aspect careful examination of switch must be made before passing over switch.

RULE 605. INTERLOCKING

All trains must move through interlocking limits with caution.

Wellton: Limits extend from interlocking signals 4,000 feet east of station building on Gila line and on Phoenix line, to interlocking signals 400 feet west of station building on westward track and 1,000 feet west of station building on eastward track.

The derail at east end of siding is electrically locked, and can be operated by trainmen only when released by signal operator.

Switches and derails to spurs leading from westward main track, just west and east of station building are hand-thrown, but must not be used until permission is secured from signal operator.

Picacho: Limits extend from Signal 9366SA on Gila Line and Signal 9796SA on Phoenix line, to Signal 9369SA on Wymola line, Signal 9801SA on north siding, and Signal 9367SA on south siding. North and south sidings are in automatic block system.

Tucson, Sixth Ave.: Limits extend from point opposite Signal 9835 on both main tracks, to end of double track, and on passenger track 1 to dwarf signal 7 feet west of west switch of passenger track 2, and on freight lead to dwarf signal 10 feet east of Sixth Ave. tower, and on middle track to dwarf signal 230 feet west of east switch, and on Independent Ice lead to dwarf signal 240 feet west of Sixth Ave. tower.

Signals prescribed by Rule 628 may be given from tower window.

Whistle signals:

Eastward passenger trains approaching tower o ——— o

Eastward freight trains approaching tower ——— o ———

Independent Ice lead to westward track ———

Mescal: Interlocking signals of Rio Grande Division will display indication in the upper quadrant. Signal arm extending upward parallel to signal mast indicates "proceed".

Limits are between home signals at east switch of east crossover and west switch of west crossover on Rio Grande Division, and home signals at east and west ends of north and south sidings on Tucson Division. Switches are under control of signal operator, except switches leading from north siding to water and outfit spurs; from south siding to both legs of wye, and to west end of coal track. Switch and derail east end coal track are hand-thrown, but must not be used until permission is secured from signal operator. North and south sidings have no signal control between Interlocking Limit signs.

Where hand signals, as prescribed by Rule 628, cannot be seen, trains stopped will call the signal operator and secure permission to proceed; also to throw switches by hand in event the remote control appliance is inoperative.

Whistle signals:
Eastward trains to Tucson Division o o ——— o o
Eastward trains to Rio Grande Division ——— o o o o
Eastward trains to south siding o ——— o
Eastward trains south siding to Tucson Division o o ——— o
Eastward trains south siding to Rio Grande Division o ——— o o
Westward trains north siding to Track No. 1 ——— ——— o o
Westward trains Tucson Division to Track No. 1 o ——— ———
Westward trains Tucson Division to north siding o o ——— ———
Westward trains Rio Grande Division to Track No. 1 ——— o ———
Westward trains from Rio Grande Division through east crossover and Tucson Division to Track No. 1 o ——— ——— o

TAKE-SIDING INDICATOR

RULE 705. Picacho: When letter "S" is displayed, the letter "N" or "S" will also be displayed. When the letter "N" is displayed in conjunction with the letter "S," westward trains will use north siding. When the letter "S" is displayed in conjunction with the letter "S," westward trains will use south siding. This indicator located on Signal 9385.

RULE 740. ABSOLUTE-PERMISSIVE BLOCK SYSTEM

YUMA-COLORADO

Limits extend from absolute signals west of Colorado River bridge to absolute signals east of Colorado River bridge. Speed must not exceed 6 MPH until engine has passed spring switch at opposite end of bridge.

Trains stopped by absolute signal west of bridge must obtain permission from yardmaster, and also make inspection of spring switches at each end of bridge before proceeding.

RULE 824. Instructions for setting hand brakes:

Yuma: Freight trains	Four brakes on east end, Two brakes on west end.
East Yard: Freight trains	Two brakes on east end, Five brakes on west end.
Phoenix Yard: Freight trains	Two brakes on west end, Two brakes on east end.
Tucson: Passenger trains	Two brakes on west end, Two brakes on east end.
Freight trains	Fifteen brakes on west end, Ten brakes on east end.
Tucson, PFE Yard: Freight trains	Fifteen brakes on west end, Ten brakes on east end.

At Tucson hand brakes on passenger trains are to be set after engine is spotted for oil. If necessary to detach engine after these hand brakes have been released, employe before detaching engine must see that sufficient hand brakes have again been set.

At points where hand brakes must be set on freight trains such brakes must be securely set, using standard brake club to set staff brakes, after train or cut has stopped, unless yardmen immediately take charge and yard engine is coupled to cars. Any employe releasing any of these brakes must set as many others to replace them.

RULE 836. Cars moved from one station to another ahead of engine on descending grade must be chained to the engine. Switching movement on descending grades must be protected by a derail. When practicable engine must be kept on descending grade end of cars.

RULE 837. Fifth paragraph is revised to read as follows: Cars standing on grade must not be coupled onto, in descending direction, without knowing sufficient hand brakes are set to prevent uncontrolled movement of any such cars should coupling fail or cars not be securely coupled together.

RULE 849. Steam valve on Pullman troop sleepers cannot be opened while train is in motion, and when such car is on rear of train steam line must not be cut in any portion of train until valve is closed on the car on each side of coupling to be opened, to avoid burning by steam.

RULE 827. TRAIN INSPECTION

Engines running light on descending grades must stop for inspection at freight train inspection points.

Freight trains must be inspected at each water stop. When conditions are favorable, and in the judgment of conductor and engineer it is safe to do so, and when additional stops can thereby be avoided, freight trains may run between water stops without stopping for inspection, provided the distance is not over 60 miles, except freight trains and light engines may run between Tucson and Maricopa, and between Aztec and Yuma, for inspection. This does not relieve trainmen, however, from making inspection when stops permit, or whenever it is necessary in the judgment of conductor or engineer. On branch lines distance of 40 miles must not be exceeded, and on descending grade must stop at Cutter.

Trains, including military trains, made up in part of freight cars or caboose equipped with cast iron wheels are required to comply with rules and time-table instructions applying to freight trains as they relate to stopping for train inspection, and speed restrictions.

Cars bearing placards denoting contents are explosive, inflammable, poisonous or otherwise dangerous, must be given careful inspection at all points where train inspection is made.

AIR BRAKE RULES

RULE 17. Retainers will be used on grades of 1.4% to 1.5% on freight trains of less than 110 M's per operative brake when necessary in the judgment of conductor and engineer.

On freight trains averaging 110 M's and over on grades of 1.4% to 1.5% and on all freight trains on grades of 1.5% and over, retainers will be used as follows:

Mescal to Benson	1.4%	grade,	One	Retainer	for	each	150 M's
Steins to Mondel	1.4%	"	"	"	"	"	150 M's
Steins to Bawtry	1.4%	"	"	"	"	"	150 M's
Sibyl to Benson	1.4%	"	"	"	"	"	150 M's
Pinal to Globe	2%	"	"	"	"	"	120 M's
Globe to Burch	2%	"	"	"	"	"	120 M's
Live Oak to Miami	3%	"	"	"	"	"	100 M's
Miami to Burch	1.4%	"	"	"	"	"	150 M's
Pinal to Cutter	2.2%	"	"	"	"	"	120 M's

When retainers are used, stops will be made for inspection and to permit heat of wheels to equalize, as follows:

Eastward: Chamiso
Westward: Fenner
Vanar

FREIGHT TRAINS

RULE 25. Freight trains may pass
Mescal, Eastward
Estrella, Dragoon and Steins, Westward
Pinal, Eastward and Westward
without stopping for purpose of rear end air test if proceed signal is given from rear by trainmen, after complying with Air Brake Rule 4, and air gage indicates required air brake pressure. Speed approaching summit must not exceed 15 MPH.

If proceed signal is not given or received, train must stop and rear end air test be made.

PASSENGER TRAINS

RULE 39.—Runningair-brake test not required of eastward passenger trains approaching Crossing—AT&SF Wye.

Incoming passenger enginemen will leave automatic air brakes set on trains at Tucson, Phoenix and Yuma after final stop has been made.

Outgoing enginemen will release brakes on signal from carmen, this signal to be given only after all switching has been done.

MISCELLANEOUS

1. Wellton, Aztec, Sentinel, Gila, Casa Grande, Florence, Hayden Jct., Benson, and San Simon, water for engine purposes is treated and must not be taken for domestic use except as follows:

Aztec, water rack, or by closing valve between treater and water column.

Sentinel, water rack and east water column.

Hayden Jct., by closing valve between treater and water column.

Benson, either of the two columns at station, by first opening switch in box on outside of freight house.

When filling water cars for domestic purposes at Hayden Jct. and Benson, after closing valve between treater and water column, fill engine tank to drain line of treated water before filling water cars.

Aztec, westward freight trains take water when possible and take water at Sentinel only when it will avoid delay west of there.

Sentinel, eastward freight trains take water and fill water car, and take water at Aztec only when necessary or when it will avoid delay at Sentinel.

Saddle, emergency water station, take only enough water to reach next water station.

Maricopa, eastward and westward freight trains take water, and if necessary, fill water car.

Benson, when business is heavy, westward freight trains and light engines take water at columns at station, to avoid shortage in east tank.

Sibyl, westward identified and other important freight trains may take water if it will avoid stopping at Benson. Other freight trains and light engines will not take water except in case of emergency, and then only sufficient to reach Benson.

In all cases where it is necessary to make a short move with heavy freight train to reach water or oil column, including that required to spot second engine of double-headed train, engine must be cut off before spotting at column.

4. Helper service:

No helper engine will be placed behind wooden underframe cars or cabooses.

Engines weighing more than 235,000 pounds on drivers will not be placed behind steel underframe cabooses.

In no case will more than one helper engine be placed behind steel underframe cabooses.

One helper may be placed on head end, but not more than two engines will be used on head end of any freight train. When additional helpers are required, they will be placed back in train and cut in ahead of any cars of wooden frame construction.

When one Diesel helper is used it will be placed on head end; when two Diesel helpers are used, one will be placed on head end and one on rear end; when one Diesel and one steam engine are used as helpers the Diesel will be placed on head end and steam engine helper on the rear.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

When used as helpers in rear of train, AC, AM or MM class engines must not be coupled together, nor may more than two F, Mt, or heavier class, or more than three smaller classes be coupled together. When coupled, larger engines must be placed ahead of smaller engines. If tonnage requires more power, additional helpers of not to exceed two coupled in each case, must be separated by at least four cars.

Helpers must not be operated backing except in emergency, and in such case engines should not push through a backing engine if it can be avoided.

Helper engines coupled in middle or rear of train must be cut off from forward portion before taking water. On grades road engine and helper must not be cut off from train at the same time without hand brakes being securely set.

4 (a). For the purpose of pushing trains out of yards:

No engine will be placed behind wooden underframe caboose or other wooden frame equipment.

Engines weighing more than 235,000 pounds on the drivers will not be placed behind steel underframe cabooses.

Air will not be coupled through pusher engine.

Yard engines regularly so used will be equipped with Russell-Jordan device to hold the coupler pin from dropping, thus making it unnecessary for employes to uncouple the pusher engine when cutting off.

In no case shall the knuckle be removed, or closed, or cutting lever temporarily fastened in release position on a pusher engine, as means of preventing coupling being made.

Unless local conditions require, it will not be necessary to stop trains to detach pusher engines.

5. Litchfield, gate at entrance Airplane spur is locked with Government lock, and to gain entrance it will be necessary for engineer to sound a long and short blast of steam whistle and the watchman on duty will take care of the opening and closing of the gate.

Litchfield Park, Boswell spur is protected by gate, which must be kept closed and locked when not in use.

Tovrea, entrance to Tovrea Packing Co. plant is protected by gates, which must be kept closed and locked when not in use. Look out for rubbish and material alongside tracks around plant.

Hayden, entrance to Kennecott Copper Corp'n plant is protected by gate, which must be closed and locked at night.

Coolidge, gate at entrance to Indian Service spur must be kept closed and locked when not in use.

Tucson, PFE yard, look out for ice and rubbish alongside PFE tracks.

Willcox, look out for bedding sand between tracks 2 and 3.

7. Capacity of sidings between clearance points is based on an average car length of 49 feet not including engines and caboose.

Figures between station names on schedule pages indicate distance from initial switch of siding at one station to initial switch of siding at next station. If no siding it is distance to point where time applies.

10.

Page	Class of Engine		RESTRICTED TRACKS
3	Engines over 210,000 lbs. on drivers	Tempe	Tempe Milling Co. spur; Phoenix Mill spur; Gravel pit spur; Tracks 2 and 3.
3	Engines over 210,000 lbs. on drivers	Mesa	McKellips spur; Standard Oil spur; Texas Oil spur; Shell Oil spur; Independent Cotton and Oil spur; Mutual Cotton Oil spur; Union Oil spur; Mesa Milling Co.
3	Engines over 200,000 lbs. on drivers	Kendall	River track, east of spur.
4	Engines over 200,000 lbs. on drivers	Magma	Spur.
5	Engines over 200,000 lbs. on drivers	Creamery Br.	All spurs.
6	Engines over 200,000 lbs. on drivers	Creamery	Track east of Creamery plant.
7	Engines over 210,000 lbs. on drivers	Tempe Br.	All Sidings and spurs.
8	Engines over 233,000 lbs. on drivers	Creamery Br.	Main track.
8	Engines over 233,000 lbs. on drivers	Tempe Br.	Main track.

Engines must not use Seaside Oil Co. spur at Buckeye and spur at Burns.

Derail on Government spur at Dateland, 360 feet west of main track switch.

11. Phoenix, Santa Fe and Southern Pacific trains may jointly use tracks at east and west end of Union Station. Yard and light engines must take every precaution possible to avoid delaying first-class trains on all tracks within Union Station zone. Trains will approach switch at entrance to Union Station tracks prepared to stop and will proceed only when track is known to be clear.

Bowie, No. 5 track in west yard must be kept clear for through movement.

20. Handling of freight cars in trains behind passenger cars is prohibited except passenger equipment may be placed in head end of mixed trains when carrying personnel and equipment in connection with military and naval movements. This does not refer to a baggage, express, or mail car, or a caboose.

Baggage, express, mail, refrigerators or other head end cars must not be handled on rear of passenger trains unless trainmen can pass through them.

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels.

When necessary to handle passenger equipment, except official cars in freight trains, it must be placed next to caboose, provided rear-end freight cars in train will permit.

25. Electric lanterns may be used for displaying white light only, except may be used by herders for displaying green lights.

SPEED OF TRAINS REGULATED BY ORDINANCES THROUGH CITY LIMITS

PAGE	STATION	MPH
2	Yuma over street crossings	5
3	Tempe	20
6	Nogales	20
6	Pima	25
7	Willcox	40

AVERAGE TARE WEIGHTS OF PASSENGER TRAIN CARS

CLASS	NOT AIR-CONDITIONED		AIR-CONDITIONED	
	All-Steel	Steel Underframe	All-Steel Cooling Season	All-Steel Heating Season
Box-Baggage—40 ft. 6 in.	48,165			
Baggage—60 ft.	95,188	79,990		
“ —61 ft.		90,478		
“ —66 ft.	129,018	107,727		
“ —70 ft.	125,676			
Baggage & Mail—60 ft.	111,204			
“ “ “ —66 ft.	135,460	119,220		
“ “ “ —69 ft.	128,017			
“ “ “ —70 ft.	131,100			
Baggage & Passenger—60 ft.	102,015			
“ “ “ —61 ft.		115,200		
Baggage—Horse—70 ft.	133,275			
“ “ —80 ft.	150,265			
Postal—40 ft.	83,467			
“ —60 ft.	118,466			
Postal Storage—60 ft.	108,335			
“ “ —61 ft.	121,210			
Express Refr.—P.F.E. Nos. 500 to 799		83,200		
Club (ACI)			165,233	159,233
Official	158,046	158,182		
“ (ACW)			191,108 121,160	191,108 121,160*
“ (ACE)			172,200 142,800	172,200 142,800*
Chair—60 ft.	105,206			
“ —60 ft. (ACI)			140,150	134,150
“ —72 ft. (ACI)			163,323	157,323
“ —72 ft. (ACW)			159,639	159,639
“ —73 ft. (ACI)			155,133	149,133
“ —74 ft. (ACI)			179,383	173,383
“ —74 ft. (ACW)			170,087	170,087
“ —74 ft. (ACS)			196,908	180,908
Coach—60 ft.	100,304			
“ —60 ft. (ACI)			134,334	128,334
“ —70 ft. (ACI)			156,925	150,925
“ —70 ft. (ACW)			152,450	152,450
“ —72 ft. (ACI)			161,464	155,464
“ —72 ft. (ACW)			158,708	158,708
“ —74 ft. (ACI)			174,840	168,540
“ —72 ft. (Suburban)	120,243			
All-Day Lunch—60 ft.	102,171			
“ “ “ —60 ft. (ACI)			125,250	119,250
Cafe-Lounge—70 ft. (ACI)			171,300 181,400	165,300 175,400*
Light Weight Equipment				
Chair-Baggage (ACS)			127,000	111,000
Chair (ACW)			120,000	120,000
“ (ACS)			127,000	111,000
“ —Articulated (ACS)			208,000	176,000
“ — “ (ACW)			198,000	198,000
Diner (ACS)			129,000	113,000
“ —Triplex (ACS)			349,000	301,000
“ — “ (ACW)			299,000	299,000
“ — “ (Lark) (ACW)			305,000	305,000
Tavern (ACS)			162,000	114,000
Parlor (ACS)			130,000	114,000
Parlor-Observation (ACS)			123,000	107,000
“ “ (ACW)			115,000	115,000
Diner—73 ft.	158,113			
“ —77 ft. (ACM)			199,714	183,714
“ —77 ft. (ACW)			169,369	169,369
“ —77 ft. (ACI)			183,217	177,217
“ —79 ft. (ACW)			176,480	176,480
“ —80 ft. (ACM)			210,340	194,340
Lounge—75 ft. (ACW)			159,476	159,476
“ —75 ft. (ACI)			170,786	164,786
“ —80 ft. (ACW)			185,333	185,333
“ —80 ft. (ACI)			190,870	184,870
Observation-Lounge—77 ft. (ACW)			187,053	187,053
Observation-Smoking—73 ft.		156,080		
“ “ —75 ft.	156,000			
“ “ —75 ft. (ACI)			166,100	160,100
Pullman—Sleeper (ACM)			193,985	177,985
“ — “ (ACI)			182,350	176,350
“ —Tourist (ACM)			191,076	175,076
“ — “	159,329			
Pullman—(lightweight) (ACW)			133,600	133,600
“ —(“) (ACM)			140,530	124,530
Pullman—Troop Sleeper	75,250			
“ — “ Kitchen	78,920			
USA—Kitchen	80,800			
“ —Ward (ACI)			179,300	173,300
“ — “ (ACM)			173,400	157,400
“ —Dressing (ACI)			171,700	165,700
“ —Hospital—(Cars 89200-89201) (ACI)			168,100	162,100
“ — “ (Cars 89340 to 89352) (ACI)			156,600	150,600

*Steel Underframe.

CODE:—
NAC—Non-Air-Conditioned.
ACI—Air-Conditioned—Ice System.
ACM—Air-Conditioned—Mechanical System.
ACW—Air-Conditioned—Waukesha System.
ACS—Air-Conditioned—Steam Ejector System.
ACE—Air-Conditioned—Evaporative System.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE

MILE POST	LOCATION	DESCRIPTION	
		YUMA-PHOENIX	
778.0		Gila River bridge	Side
891.0		Aqua Fria River bridge	Side
914.0		Salt River bridge	Side
959.3		Gila River bridge	Side
		PHOENIX-TUCSON	
975.95		Rillito Creek bridge	Side
983.9		Car repair shed	Side
		CHRISTMAS BRANCH	
963.96		Rock cut	Side
964.1		Rock cut	Side
965.56		Rock cut	Side
971.30 to 971.77		Rock cuts	Side
972.4		Tunnel No. 1	Side and Overhead
972.5		Gila River bridge	Side
973.0		Rock cut	Side
973.04		Rock cut	Side
973.07		Rock cut	Side
976.0 to 977.0		Rock cuts	Side
980.0 to 982.0		Rock cuts	Side
983.5		Rock cut	Side
985.3		Gila River bridge	Side
985.5		Rock cut	Side
987.8	Ray Jct	Water tank and spout	Side
988.3		Rock cut	Side
988.5		Tunnel No. 2	Side and Overhead
990.0		Tunnel No. 3	Side and Overhead
992.3		Rock cut	Side
997.4		Rock cut	Side
998.8	Hayden Jct.	Water column	Side
1006.5		Rock cut	Side
1009.2		Tunnel No. 4	Side and Overhead
		NOGALES BRANCH	
988.3	Tucson	Loading chute	Side
		GLOBE BRANCH	
1201.1	San Carlos	Water tank and spout	Side and Overhead
1213.5	Cutter	Water column	Side
		TUCSON-LORDSBURG	
984.4	Tucson	Base of Signal 9844	Side
1008.1		Cienega Creek bridge	Side
1008.2		Rock cut	Side
1008.3		Rock cut	Side
1032.5	Benson	Water column	Side
1032.5	Benson	San Pedro River bridge	Side
1098.4	Bowie	Water column	Side
1114.2	San Simon	Water tank spout	Side

Employes are warned that it is dangerous to ride on top or sides of cars while passing these points and that they must protect themselves from injury.

There are numerous structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their locations and avoid personal injury.

DIVISION MILEAGE

Main Lines

Yuma to Lordsburg	SPRR			412.58	
Wellton to Picacho, via Phoenix	AERR		195.88		
	SPCo		13.10		
	SPRR		.03	209.01	
Total Main Lines					621.59

Branches

Benson-Fairbank	SPRR	At Benson	.29		
	EP&SWRR	At Benson	.33	.62	
Christmas	SPCo	McQueen to Winkelman	74.40		
	AERR	Erman to Christmas	12.26		
	KCC	Hayden Jct. to Hayden	.32	86.98	
Creamery	AERR	At Tempe	.47		
	SPCo	Tempe to Normal Jct.	1.72	2.19	
Globe	AERR	Bowie to Live Oak		136.14	
Litchfield	AERR	Litchfield to Litchfield Park		4.92	
Nogales	SPRR	Tucson to Nogales		65.79	
Tempe	AERR	Tempe Jct. to West Chandler		7.82	
Yuma Valley	YVRR	Yuma to Somerton		15.00	
Total Branches					319.46
Total Tucson Division					941.05

MAXIMUM SPEED PERMITTED CERTAIN ENGINES, SUBJECT TO FURTHER RESTRICTIONS AS SHOWN IN SPEED RESTRICTIONS TABLE

Maximum speed for SP-1-2-3 not cross counter-balanced, C-15-17-32, Mk-10-11 and MM-3 class engines 35 MPH when handling Freight and Mixed Trains.

Maximum speed for S and SE class engines, 20 MPH, but must not exceed speed permitted Freight and Mixed Trains and Light Engines.

Maximum speed for Gas-electric cars running light forward, 50 MPH, but must not exceed speed permitted when handling Passenger Trains.

Engines backing must not exceed 20 MPH on all curves, and when approaching road crossings at grade.

Engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Engines with tenders having water capacity 7,000 gallons or less, except Classes 70-R-1 and 70-SC-1, must not exceed 50 MPH.

Diesel electric switch engines running forward, with train or light, may make maximum speed as shown below, except must not exceed speed permitted Freight and Mixed trains. These engines when backing may make speed shown below, except must not exceed speed permitted E class engines backing where such permitted speed is less than 30 MPH:

Classification	Running Forward		Running Backward
	With Train	Light	With Train or Light
DES-200	30	30	30
DES-1 to 7 inc	40	40	40
DES-100 to 107 inc	40	40	40

Maximum speed of engines under following conditions, running under own steam or hauled in train, must not exceed:

When all weight has been removed from any one pair of drivers....20 MPH
When all weight has been removed from only one wheel from any pair of drivers....30 MPH
When engine truck is removed....20 MPH
When main rod only is removed....30 MPH
When side rod only is removed....30 MPH
When both main and side rods are removed....20 MPH
When hauled in train with all rods on....30 MPH

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT

PAGE	TYPE OF ENGINE—TERRITORY—STRUCTURE—LADING, ETC.	MPH
	Trains handling wooden pile-drivers; locomotive cranes with boom disconnected and heavy end forward; steam shovels and ditchers, transported on their own wheels; and car-top ditchers when blocking and tie-down cables are removed:	
2-3-4-5-7	On tangent main tracks	35
	except SPMW 4044	25
4-5-6	On tangent branch tracks	25
All	On all curves....5 MPH less than speed authorized. Where slow boards in place 5 MPH less than shown on slow boards, except when speed indicated is 15 MPH or less be governed by slow boards.	
	Trains handling locomotive cranes with boom disconnected and light end forward (must not be handled in this manner except in emergency):	
2-3-4-5-7	On tangent main tracks	20
All	On curves and on branch tracks	15
	Trains handling locomotive cranes with boom in place, either end forward (to be handled in work trains when practicable):	
2-3-4-5-7	On tangent main tracks	25
All	On curves and on branch tracks	15
All	Trains handling steel pile-drivers may make maximum freight train speed.	
	Trains handling relief outfit with steam derrick:	
2-3-4-5-7	On tangent main tracks	35
4-5-6	On tangent branch tracks	25
All	On all curves....5 MPH less than speed authorized. Where slow boards in place 5 MPH less than shown on slow boards, except where speed indicated is 15 MPH or less be governed by slow boards.	

Maximum speed of deadhead equipment or passenger trains with standard caboose is 50 MPH between Tucson and Mescal.

Trains consisting of engine and caboose only are considered freight trains and speed restricted accordingly.

Passenger trains handling steel wheel box cars or foreign line steel wheel box cars equipped for movement in passenger trains, except those equipped with high speed trucks, must not exceed speed of 60 MPH.

Baggage and Express cars in Series 5800-5874 are not equipped with high speed trucks. Trains handling them must not exceed 60 MPH.

Wooden passenger-carrying cars, wooden baggage, express and other head end cars, unless equipped with steel center sills and steel platforms must not be used in passenger trains. Speed of trains handling such cars restricted to 40 MPH.

If consist of train includes both wooden and steel passenger-carrying cars, the wooden cars must be kept together and handled on rear.

SPEED RESTRICTIONS: **Maximum speed of Passenger trains must not exceed 50 MPH and Freight and Mixed trains 35 MPH** except as otherwise provided for herein, or by bulletin, train order or "fixed signal."

Maximum speed of any train with an engine not shown in Speed Restriction table, 35 MPH, and is further restricted to Maximum speed shown for Freight and Mixed trains if less than 35 MPH.

Page No.	TERRITORY	WITH TRAIN — ENGINE RUNNING FORWARD									LIGHT ENGINE RUNNING FORWARD				ENGINE BACKING WITH TRAIN OR LIGHT	
		PASSENGER								FREIGHT AND MIXED						
		P-8 (if CCB*) P-7-10-12 GS Mt	E A P-1-3-4-5-6-11 P-8 (if not CCB*)	T -26 -32 -37 -40	AC-4-5-7-8-9-10-11-12 AC-6 (if CCB*)	T-1-8-9-23-28-31-36-57-58 Mk-5-6-7-8-9 F (if CCB*) SP (if CCB*) Gas-elec. cars	M AM-2	C-2-4-5-8-9-10-18-19-26-27-28-29 Mk-2-4, TW F (if not CCB*) AC-1-2-3-6 (if not CCB*)	C-15-17-32 Mk-10-11 MM-3 SP (if not CCB*)		E P A Mt GS	T-26-32-37-40 F (if CCB*)	M T-1-8-9-23-28-31-36-57-58 C-2-4-5-8-9-10-18-19-26-27-28-29 Mk-5-6-7-8-9 F (if not CCB*) SP	C-15-17-32 TW Mk-2-4-10-11 AC AM-2 MM-3	E A T P C TW Mk F Mt GS SP	M AC AM-2 MM-3 Gas-elec. cars
	West yard limit, Yuma - Spring switch W. end Colorado bridge	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	Spring switch W. end Colorado bridge - spring switch E. end Colorado bridge	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
2	Spring switch E. end Colorado bridge - E. switch Yuma yard	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
2	E. switch Yuma yard - MP 735.50	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
2	MP 735.50 - Yard Office, East Yard	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25
2	Yard Office, East Yard - End of Double Track MP 737.51	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
2	End of Double Track MP 737.51 - MP 741.10	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
2	MP 741.10 - MP 748.58	50	50	50	50	50	40	40	35	35	45	40	35	30	30	25
2	MP 748.58 - MP 755.12	40	40	40	40	40	40	40	35	35	40	40	35	30	30	25
2	MP 755.12 - MP 762.88	50	50	50	50	50	40	40	35	35	45	40	35	30	30	25
2	MP 762.88 - Wellton, West Interlocking limit	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
2	Wellton, West Interlocking limit - MP 766.00 (Westward Track)	50	50	50	50	50	40	40	35	35	45	40	35	30	30	25
2	Wellton, East crossovers	25	25	25	25	25	25	25	25	20	20	20	20	20	20	20
2	MP 770.83, East Interlocking limit - MP 776.36	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
2	MP 776.36 - MP 790.00	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
2	MP 790.00 - MP 795.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
2	MP 795.00 - MP 899.00	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
4	Litchfield Branch	20	20	20	20	20	20	20	20	20	20	20	20	20	15	15
2	MP 899.00 - MP 903.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
2	MP 903.00 - Signal 9048, MP 904.77	40	40	40	40	40	40	40	35	25	40	40	35	30	30	25
2-3	Signal 9048, MP 904.77 - End of Double Track, MP 907.91	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
3	End of Double Track, MP 907.91 - East yard limit MP 908.79	40	40	40	40	40	40	40	35	25	40	40	35	30	30	25
3	East yard limit, MP 908.79 - MP 912.74	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
3	MP 912.74 - MP 913.77 (West City limit, Tempe)	40	40	40	40	40	40	40	35	25	40	40	35	30	30	25
6	Creamery Branch	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
3	MP 913.77 - MP 915.31 (East City limit, Tempe)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
6	Tempe Branch	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
3	MP 915.31- MP 915.79	40	40	40	40	40	40	40	35	25	40	40	35	30	30	25
3	MP 915.79 - MP 920.45 (West yard limit, Mesa)	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
3	MP 920.45 - MP 921.10 (West switch, Mesa)	40	40	40	40	40	40	40	35	25	40	40	35	30	30	25
3	MP 921.10 - MP 922.07 (East wye switch, Mesa)	25	25	25	25	25	25	25	25	20	25	25	25	25	25	20
3	MP 922.07 - MP 923.23 (East yard limit, Mesa)	40	40	40	40	40	40	40	35	25	40	40	35	30	30	25
3	MP 923.23 - MP 929.10 (West switch, Chandler)	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
3	MP 929.10 - MP 929.92 (East switch, Chandler)	40	40	40	40	40	40	40	35	35	40	40	35	30	30	25
3	MP 929.92 - MP 948.00	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
3	MP 948.00 - MP 950.74	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
3	MP 950.74 - MP 961.57 (West switch, Coolidge)	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
3	MP 961.57 - MP 962.33	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25
3	MP 962.33 (East switch, Coolidge) - MP 972.35	50	50	50	50	50	40	40	35	35	40	40	35	30	30	25
3	MP 972.35 - MP 979.32 (West wye switch, Picacho)	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
3	Picacho West wye switch - East Interlocking limit Signal 9369SA	25	25	25	25	25	25	25	25	20	25	25	25	25	25	25
3	Picacho Signal 9369SA - MP 938.00	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
3	MP 938.00 - MP 981.91 (West yard limit, Tucson)	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
3	MP 981.91 - MP 982.73 (Signal 9828)	40	40	40	40	40	40	40	35	30	20	20	20	20	20	20
3-7	MP 982.73 (Signal 9828) - MP 985.26 (West switch PFE yard)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

*List of CCB (cross counter-balanced) engines:

All P-8 class, except Eng. 2470;
F-1 class: 3611, 3612, 3615, 3616, 3619, 3620, 3625, 3634, 3636, 3638, 3643, 3647, 3652;
F-3 class: 3653, 3654, 3655, 3656, 3657, 3658, 3660, 3661, 3662, 3663, 3664, 3665, 3666;
F-4 class: 3668, 3670, 3671, 3672, 3674, 3676, 3677, 3678, 3681, 3682, 3683, 3684, 3685, 3686, 3687, 3688, 3692, 3695, 3696, 3697, 3701, 3702, 3704, 3705, 3706, 3707, 3709, 3711, 3715, 3716, 3717;
F-5 class: 3718, 3720, 3721, 3727, 3728, 3732, 3734, 3737, 3742, 3752, 3753, 3755, 3760, 3763, 3764, 3765, 3766, 3767, 3768, 3769;
AC-6 class: 4126, 4127, 4128, 4130, 4131, 4132, 4133, 4135, 4136, 4137, 4138, 4140, 4142, 4143, 4144, 4146, 4149, 4150;
SP-1 class: 5001, 5002, 5003, 5006, 5008, 5009, 5011, 5012, 5013, 5014, 5015;
SP-2 class: 5016, 5017, 5018, 5019, 5020, 5021, 5022, 5023, 5024, 5025, 5026, 5027, 5028, 5029, 5031, 5032, 5033, 5034, 5035, 5038;
SP-3 class: 5039, 5040, 5041, 5042, 5043, 5044, 5045, 5047, 5048.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	WITH CAUTION NOT EXCEEDING MPH
Through sidings, yard and other side-tracks, crossovers, turnouts and slip-switches, except:	15
On P.F.E. yard tracks 1 to 6 inc., Tucson	10
Through any crossover, turnout or slip-switch with engine backing	10

SPECIAL INSTRUCTIONS

SPEED RESTRICTIONS: Maximum speed of Passenger trains must not exceed 50 MPH and Freight and Mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or "fixed signal."
Maximum speed of any train with an engine not shown in Speed Restriction table, 35 MPH, and is further restricted to Maximum speed shown for Freight and Mixed trains if less than 35 MPH.

Page No.	TERRITORY	WITH TRAIN — LIGHT ENGINE RUNNING FORWARD									LIGHT ENGINE RUNNING FORWARD				ENGINE BACKING WITH TRAIN OR LIGHT	
		PASSENGER								FREIGHT AND MIXED						
		P-8 (if CCB*) P-7-10-12 GS Mt	E A P-1-3-4-5-6-11 P-8 (if not CCB*)	T -26 -32 -37 -40	AC-4-5-7-8-9-10-11-12 AC-6 (if CCB*)	T-1-8-9-23-28-31-36-57-58 Mk-5-6-7-8-9 F (if CCB*) SP (if CCB*) Gas-elec. cars	M AM-2	C-2-4-5-8-9-10-18-19-26-27-28-29 Mk-2-4, TW F (if not CCB*) AC-1-2-3-6 (if not CCB*)	C-15-17-32 Mk-10-11 MM-3 SP (if not CCB*)		E P A Mt GS	T-26-32-37-40 F (if CCB*)	M T-1-8-9-23-28-31-36-57-58 C-2-4-5-8-9-10-18-19-26-27-28-29 Mk-5-6-7-8-9 F (if not CCB*) SP	C-15-17-32 TW Mk-2-4-10-11 AC AM-2 MM-3	E A T P C TW Mk F Mt GS SP	M AC AM-2 MM-3 Gas-elec. cars
4	Wellton, east crossovers	25	25	25	25	25	25	25	25	20	20	20	20	20	20	20
4	Wellton, east Interlocking limit - MP 772.06	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
4	MP 772.06 - MP 772.78	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
4	MP 772.78 - MP 792.50	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
4	MP 792.50 - MP 794.03	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25
4	MP 794.03 - MP 795.00	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
4	MP 795.00 - MP 800.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
4	MP 800.00 - MP 813.00	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
4	MP 813.00 - MP 817.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
4	MP 817.00 - MP 823.61	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
4	MP 823.61 - MP 825.18	45	45	45	45	45	45	40	35	35	45	40	35	30	30	25
4	MP 825.18 - Gila, west switch	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
4-5	Gila, west switch - Gila, east switch	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25
5	Gila, east switch - MP 866.98	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
5	MP 866.98 - MP 867.85	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
5	MP 867.85 - MP 870.12	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25
5	MP 870.12 - MP 874.48	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
5	MP 874.48 - MP 886.36	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
5	MP 886.36 - MP 898.00	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
5	MP 898.00 - MP 902.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
5	MP 902.00 - Casa Grande, west City limit	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
5	Within City limits Casa Grande	40	40	40	40	40	40	40	35	40	40	40	35	30	30	25
5	East City limit, Casa Grande - Signal 9366SA Picacho	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
5	Signal 9366 SA, west Interlocking limit - MP 936.70, Picacho	25	25	25	25	25	25	25	25	20	25	25	25	25	20	20
7	MP 985.26 - MP 988.09 (Track No. 1)	30	30	30	30	30	30	30	30	25	20	20	20	20	20	20
7	MP 985.26 - MP 989.00 (Track No. 2)	40	40	40	40	40	40	40	35	30	20	20	20	20	20	20
7	MP 989.00 east yard limit, Track No. 2 - MP 991.00	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 991.00 - MP 997.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
7	MP 997.00 - MP 1004.27	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 1004.27 - MP 1010.36	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25
7	MP 1010.36 - MP 1012.62	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 1012.62 - MP 1014.00	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25
7	MP 1014.00 - MP 1016.77	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 1016.77 - MP 1018.08	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25
7	MP 1018.08 - Mescal, west Interlocking limit	40	40	40	40	40	40	40	35	30	40	40	30	30	30	25
7	Mescal Interlocking, through crossovers to R.G. Div.	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
7	Mescal, east Interlocking limit - MP 1026.00	50	50	50	50	50	40	40	35	35	45	40	35	30	30	25
7	MP 1026.00 - MP 1028.60, west switch, Chamiso	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
7	West switch, Chamiso - MP 1030.86	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 1030.86 - Benson, west switch	40	40	40	40	40	40	40	35	30	40	40	30	30	30	25
7	Benson yard limits, west to east switches	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25
7	Benson, east switch - MP 1036.96	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 1036.96 - MP 1040.78	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25
7	MP 1040.78 - MP 1044.50	45	45	45	45	45	45	40	35	30	45	40	30	30	30	25
7	MP 1044.50 - MP 1045.14	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25
7	MP 1045.14 - MP 1052.36	40	40	40	40	40	40	40	35	30	40	40	30	30	30	25
7	MP 1052.36 - MP 1058.00	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 1058.00 - Willcox, west City limit	65	65	60	55	50	45	40	35	35	45	40	35	30	30	25
7	Willcox, east City limit - MP 1076.00	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
7	MP 1076.00 - MP 1080.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
7	MP 1080.00 - MP 1083.14	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
7	MP 1083.14 - MP 1096.00	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25
7	MP 1096.00 - Bowie, east switch	60	60	60	55	50	45	40	35	40	45	40	35	30	30	25
7	Bowie, east switch - MP 1121.00	60	60	60	55	50	45	40	35	35	45	40	35	30	30	25
7	MP 1121.00 - MP 1124.44	50	50	50	50	50	45	40	35	35	45	40	35	30	30	25
7	MP 1124.44 - MP 1128.68	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25
7	MP 1128.68 - Lordsburg	65	65	60	55	50	45	40	35	40	45	40	35	30	30	25

Page No.	TERRITORY	PASSENGER		FREIGHT	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT
		Maximum	Gas-electric M-4-6-9-11 T-37 C-8-9-10 Mk-2-4-5-6-7-8-9	Freight and Mixed Maximum	M T-37 C-8-9-10 Mk-5-6-7-8-9	Mk-2-4	
5	Christmas Branch, except	40	....	30	....	....	....
5	MP 923.89 - MP 924.08	35	35	25	35	30	20
5	MP 924.08 - MP 955.93	40	40	30	35	30	20
5	MP 955.93 - MP 956.07	35	35	25	35	30	20
5	MP 956.07 - MP 964.28	40	40	30	35	30	20
5	MP 964.28 - MP 964.54	30	30	20	30	30	20
5	MP 964.54 - MP 968.79	40	40	30	35	30	20
5	MP 968.79 - MP 972.07	30	30	30	30	30	20
5	MP 972.07 - MP 972.15	15	15	15	15	15	15
5	MP 972.15 - MP 974.12	30	30	25	30	30	20
5	MP 974.12 - MP 974.20	15	15	15	15	15	15
5	MP 974.20 - MP 975.34	30	30	30	30	30	20
5	MP 975.34 - MP 975.48	15	15	15	15	15	15
5	MP 975.48 - MP 976.21	30	30	30	30	30	20
5	MP 976.21 - MP 976.36	20	20	20	20	20	20
5	MP 976.36 - MP 980.35	30	30	25	30	30	20
5	MP 980.35 - MP 980.41	15	15	15	15	15	15
5	MP 980.41 - MP 980.97	30	30	25	30	30	20
5	MP 980.97 - MP 981.03	25	25	25	25	25	20
5	MP 981.03 - MP 981.70	30	30	30	30	30	20
5	MP 981.70 - MP 981.78	25	25	25	25	25	20
5	MP 981.78 - MP 983.27	30	30	25	30	30	20
5	MP 983.27 - MP 987.43	25	25	25	25	25	20
5	MP 987.43 - MP 988.24 (Ray Jct. yard)	15	15	15	15	15	15
5	MP 988.24 - MP 999.53	30	30	25	30	30	20
5	Hayden Jct. yard, MP 999.53 - MP 1000.64	15	15	15	15	15	15
5	MP 1000.64 - Christmas	10	10	10	10	10	10

Page No.	TERRITORY	PASSENGER			FREIGHT	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT
		Maxi-mum	Gas-elec. M-4-6-9-11 T-37 C-8-9-10	Freight or Passenger Mk F-1		M T-37 C-8-9-10	Mk F-1	
6	Nogales Branch, except	35	.....	.....	25	....	....	....
	MP 984.04 - Tucson City limit, MP 985.81	15	15	15	15	15	15	15
	MP 985.81 - MP 987.42 (East yard limit)	20	20	20	20	20	20	20
	MP 987.42 - Calabasas	35	35	20	25	20	20	20
	Calabasas - MP 1046.37 (Nogales yard limit)	35	35	25	25	20	25	20
	Nogales yard limits	15	15	15	15	15	15	15

Page No.	TERRITORY	PASSENGER			FREIGHT	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT
		Gas-electric	M-6 T-37	C-8-9-10		M T-37 C-8-9-10 Mk-5-6-7-8-9	Mk-2-4	
6	Globe Branch, except	40	35	30	30	30	30	20
6	Bowie, yard limits	30	30	30	30	30	30	20
6	Bowie, east yard limit - MP 1126.12	40	35	30	30	30	25	20
6	MP 1126.12 - MP 1126.43	30	30	30	30	30	25	20
6	MP 1126.43 - Safford west yard limit	40	35	30	30	30	25	20
6	Safford yard limits	15	15	15	15	15	15	15
6	Safford east yard limit - Pima West City limit	40	35	30	30	30	25	20
6	Pima East City limit - MP 1178.03	40	35	30	30	30	25	20
6	MP 1178.03 - MP 1178.17	30	30	30	25	30	25	20
6	MP 1178.17 - MP 1183.70	40	35	30	30	30	25	20
6	MP 1183.70 - MP 1195.00	30	30	30	20	20	20	20
6	MP 1195.00 - MP 1207.01	30	30	30	25	30	25	20
6	MP 1207.01 - MP 1217.52	40	35	30	30	30	25	20
6	MP 1217.52 - MP 1218.78	25	25	25	20	25	20	15
6	MP 1218.78 - MP 1220.59	40	35	30	30	30	25	20
6	Globe yard limits MP 1220.59 - 1223.09 except	15	15	15	15	15	15	15
	Broad Street Crossing	6	6	6	6	6	6	6
6	MP 1223.09 - MP 1231.18	20	20	20	20	20	20	15
6	Miami yard limits	15	15	15	15	15	15	15
6	Inspiration Jct. - Live Oak	10	10	10	10	10	10	10

RATING OF ENGINES—TUCSON DIVISION—In Ms of 1000 lbs. Back of Tender

NOMINAL CLASS	ENGINE NUMBERS	Yuma to East Yard Pembroke to Mohawk Lava to Sentinel	East Yard to Pembroke Mohawk to Lava Sentinel to Gila Maricopa to Tucson Wellton to Saddle 2 M W Gillespie to Picacho	Gila to Estrella Saddle to 2 M W Gillespie	Estrella to Maricopa Tucson to Maricopa Estrella to Kim, Mohawk to Blaisdell Fortuna to Yuma Picacho to 2 M E Crag 2 M W Gillespie to Wellton	Maricopa to Estrella Blaisdell to Fortuna 2 M E Crag to 2 M W Gillespie	Kim to Mohawk	Tucson to Mescal (No. 2 Track)	Benson to Dragoon San Simon to Steins	Mescal to Benson Dragoon to Willcox Raso to San Simon Steins to Conrad Pyra to Lordsburg	Willcox to Raso Conrad to Pyra	Lordsburg to Pyra	Pyra to Mondel Steins to San Simon Raso to 2 M E Cochise Dragoon to Benson Mescal to Tucson (No. 1 Track)	San Simon to Bowie	Bowie to Raso 2 M E Cochise to Dragoon	Mondel to Steins Benson to Mescal	McQueen to Christmas	Christmas to McQueen	Tucson to Calabasas	Calabasas to Nogales	Nogales to Tucson	Bowie to San Carlos
DES-1,2,3,4,5,6,7	1000 to 1022	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
DES-100 to 107	1300 to 1395	....	....	1600	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
E-23	1500 and 1502	1950	2300	1400	3300	2300	1600	1200	930	5000	1850	2050	5000	2300	1400	930	2450	2950	1550	1450	2550	2450
M-4	1617 to 1713	2550	2900	1900	4300	2900	2100	1600	1250	5000	2450	2750	5000	3100	1900	1250	3150	3750	2100	1950	3400	3250
M-6, 8	1721 to 1803, 1823 to 1825	3050	3600	2250	5000	3600	2500	1950	1500	6000	2900	3250	6000	3650	2250	1500	3800	4550	2500	2300	4000	3800
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	3250	3800	2400	5300	3800	2650	2050	1600	6000	3100	3450	6000	3650	2350	1600	4100	4900	2650	2450	4200	4000
M-11	1832 to 1835	3350	3950	2500	5500	3950	2750	2150	1650	6000	3200	3550	6000	4000	2450	1650	4250	5100	2750	2550	4400	4200
T-1	2242 to 2271	2250	2600	1650	3700	2600	1800	1400	1050	5000	2100	2350	5000	2650	1600	1050	2750	3300	1800	1650	2900	2750
T-8, 9	2161, 2174 and 2178	1600	1850	1150	2650	1850	1300	990	760	5000	1500	1650	5000	1900	1150	760	2000	2400	1250	1150	2050	2000
T-23	2301 to 2310	3200	3750	2350	5300	3750	2650	2000	1550	6000	3050	3400	6000	3800	2300	1550	4000	4750	2600	2400	4200	....
T-26	2283 to 2299	2800	3250	2050	4700	3250	2300	1750	1350	6000	2650	3000	6000	3350	2050	1350	3500	4200	2250	2100	3650	....
T-28, 31	2311 to 2362	3550	4150	2600	5850	4150	2900	2250	1750	8000	3350	3750	8000	4200	2600	1750	....	....	....	....	....	....
T-32, 40	2363 to 2384	3600	4200	2650	5950	4200	2950	2300	1800	8000	3450	3800	8000	4300	2600	1800	....	....	....	....	....	....
T-36	2103	2400	2750	1750	3950	2750	1950	1500	1150	5000	2250	2500	5000	2800	1750	1150	2950	3550	1950	1800	3100	2950
T-37	2105 and 2106	3100	3700	2300	5200	3700	2550	2000	1550	6000	3000	3350	6000	3750	2300	1550	3700	4400	3100	2350	3700	3700
T-57, 58	2385 and 2386	2900	3400	2150	4800	3400	2400	1850	1400	6000	2750	3050	6000	3450	2100	1400	....	....	....	....	....	....
P-1, 3, 5	2408, 2411, 2412, 2413, 2416, 2417, 2418 2423, 2425 to 2435 2437 to 2452, 2459 and 2460	2800	3300	2000	4650	3300	2250	1800	1350	6000	2700	3050	6000	3400	2050	1350	....	....	....	....	....	3600
P-1	2400, 2403 to 2407 and 2415	3050	3500	2200	5050	3500	2450	1850	1450	6000	2050	3200	6000	3600	2150	1450	....	....	....	....	....	3750
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	3150	3700	2300	5250	3700	2600	1950	1500	6000	3000	3350	6000	3750	2250	1500	....	....	....	....	....	3900
P-6	2453, 2454 and 2458	3600	4150	2600	5950	4150	2950	2250	1750	8000	3400	3800	8000	4250	2600	1750	....	....	....	....	....	....
P-7	2476 and 2477	3850	4450	2800	6350	4450	3150	2400	1850	8000	3600	4050	8000	4500	2750	1850	....	....	....	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483	3950	4600	2850	6600	4600	3200	2450	1900	8000	3750	4150	8000	4700	2850	1900	....	....	....	....	....	....
P-8, 10	2475, 2484 to 2491	4200	4850	3050	6950	4850	3400	2600	2000	8000	3950	4400	8000	4950	3000	2000	....	....	....	....	....	....
P-11	3100 to 3109	3100	3600	2250	5150	3600	2550	1950	1500	8000	2950	3300	8000	3700	2250	1500	3850	4650	2500	2300	4050	3850
P-12	3120 to 3129	4000	4700	2900	6700	4700	3300	2600	2000	8000	3900	4350	8000	4900	3000	2000	....	....	....	....	....	....
C-5,8,9,10,26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	3900	4600	2900	6500	4600	3250	2500	1950	8000	3750	4150	8000	4650	2900	1950	4700	5600	3750	3000	5100	4900
C-15, 32	2500, 2505 to 2507	2500	2900	1850	4150	2900	2050	1600	1250	5000	2350	2650	5000	2950	1800	1250	3100	3700	2050	1850	3250	3100
C-17	2510 and 2511	3100	3600	2300	5050	3600	2550	1950	1550	6000	2950	3250	6000	3650	2250	1550	3800	4550	2500	2300	4000	3800
C-18	3400 to 3409	3600	4200	2650	5900	4200	2950	2300	1800	8000	3400	3800	8000	4250	2650	1800	4450	5300	2950	2700	4650	4450
C-19	3410 to 3426	3750	4350	2750	6150	4350	3100	2400	1850	8000	3550	3950	8000	4450	2750	1850	4650	5550	3050	2800	4850	4650
TW-1	2900 to 2913	3000	3450	2200	4900	3450	2450	1900	1450	7000	2850	3150	7000	3550	2150	1450	3700	4400	2400	2250	3850	3700
TW-2, 3	2932 to 2952	2400	2750	1750	3950	2750	1950	1500	1150	7000	2250	2500	7000	2850	1750	1150	2950	3550	2300	2050	3150	3200
TW-4, 6	2926 to 2931 and 2957	2250	2650	1650	3750	2650	1850	1400	1100	7000	2150	2400	7000	2650	1650	1100	2800	3350	1800	1700	2950	2800
TW-8	2914 to 2923	3300	3850	2450	5450	3850	2700	2100	1600	7000	3150	3500	7000	3900	2400	1600	4050	4850	2650	2450	4300	4050
A-3	3029	2250	2650	1650	3800	2650	1850	1350	1050	6000	2150	2400	6000	2700	1600	1050	....	....	....	....	....	....
A-3	3025, 3036, 3052 and 3057	2350	2750	1700	4000	2750	1900	1450	1100	6000	2250	2500	6000	2800	1700	1100	....	....	....	....	....	....
A-6	3000 to 3003	2750	3250	2000	4650	3250	2250	1700	1300	6000	2600	2950	6000	3300	2000	1300	....	....	....	....	....	....
Mk-2, 4	3201 to 3240	4500	5200	3300	7300	5200	3600	2800	2200	8000	4250	4750	8000	5300	3250	2200	*5650	*6750	4300	3300	5900	....
Mk-5, 6	3241 to 3277	5000	5750	3600	8100	5750	4000	3150	2450	8000	4700	5250	8000	5850	3650	2450	*6100	*7300	4600	3700	6500	....
Mk-7, 8, 9	3300 to 3324	5500	6350	4000	8900	6350	4500	3500	2750	8000	5200	5800	8000	6500	4000	2750	....	....	....	....	....	....
Mk-10	3295	4200	4900	3100	6900	4900	3450	2650	2100	8000	4000	4450	8000	5000	3050	2100	....	....	....	....	....	....
Mk-11	3297 and 3298	4050	4700	3000	6650	4700	3350	2550	2000	8000	3850	4250	8000	4750	2950	2000	....	....	....	....	....	....
F-1	3600 to 3652	5700	6700	4200	9300	6700	4700	3700	2900	10000	5500	6100	10000	6850	4250	2900	....	....	4600	4250	7350	....
F-3	3653 to 3667	6500	7600	4800	10800	7600	5400	4200	3300	10000	6300	7000	10000	7800	4850	3300	....	....	....	....	....	....
F-4, 5	3668 to 3769	6700	8000	5000	11500	8000	5600	4750	3750	10000	7100	7850	10000	8800	5450	3750	....	....	....	....	....	....
AM-2	3900 to 3911	6550	7550	4800	10700	7550	5350	4150	3250	10000	6200	6850	10000	7700	4750	3250	....	....	....	....	....	....
MM-3	3930 and 3931	7600	8800	5600	12500	8800	6200	4900	3850	10000	7300	8100	10000	9000	5600	3850	....	....	....	....	....	....
AC-1, 2, 3	4000 to 4048	7900	9150	5850	12950	9150	6500	5050	3950	12000	7500	8350	12000	9300	5750	3950	....	....	....	....	....	....
AC-4, 5	4100 to 4125	10300	11950	7650	14000	11950	8500	6550	5150	14000	9800	10850	14000	12150	7550	5150	....	....	....	....	....	....
AC-6 to 12	3800 to 3811, 4126 to 4294	10500	12000	8000	14000	12000	8800	7400	5500	14000	10400	11500	14000	12900	8000	5500	....	....	....	....	....	....
Mt-1, 3, 4, 5	4300 to 4376	5400	6400	3850	9000	6400	4350	3800	2950	10000	5650	6300	10000	7050	4350	2950	....	....	....	....	....	....
Mt-2	4385 to 4390	5600	6600	4000	9300	6600	4500	3550	2800	10000	5350	5950	10000	6700	4100	2800	....	....	....	....	....	....
GS-1, 2	4400 to 4415	5650	6600	4100	9450	6600	4600	3500	2700	10000	5350	5950	10000	6700	4050	2700	....	....	....	....	....	....
GS-3, 4, 5, 6	4416 to 4469	6000	7000	4300	9700	7000	4800	3900	3000	10000	6000	6700	10000	7500	4550	3000	....	....	....	....	....	....
SP-1, 2, 3	5000 to 5048	7600	8800	5600	12500	8800	6200	5350	4350	10000	8000	8850	10000	10000	6150	4350	....	....	....	....	....	....
Allowance for Empty and Underloaded Cars	Less than 45 M's	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45 M's to 55 M's	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	More than 55 M's	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Engs. 3201 and 3224 only permitted to operate between Hayden Jct. and Christmas.

ENGINES FOR WHICH NO RATING IS SHOWN IN THE RATING OF ENGINES TABLE WILL NOT BE PERMITTED TO OPERATE IN THAT TERRITORY UNLESS AUTHORIZED BY SUPERINTENDENT.

RATING OF ENGINES—TUCSON DIVISION—In Ms of 1000 lbs. Back of Tender

NOMINAL CLASS	ENGINE NUMBERS	San Carlos to Cutter	Cutter to Pinal	Pinal to Globe	Globe to Miami	Miami to Globe	Globe to Pinal	Pinal to San Carlos	San Carlos to Tanque	Tanque to Bowie
DES-1,2,3,4,5,6,7	1000 to 1022	....	....	....	....	....	....	....	....	....
DES-100 to 107	1300 to 1395	....	....	....	....	....	....	....	....	....
E-23	1500 and 1502	1200	580	5000	970	880	580	5000	2050	1550
M-4	1617 to 1713	1600	830	5000	1300	1200	830	5000	2750	2100
M-6, 8	1721 to 1803, 1823 to 1825	1950	990	6000	1550	1450	990	6000	3250	2500
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	2050	1050	6000	1650	1550	1050	6000	3450	2650
M-11	1832 to 1835	2150	1100	6000	1750	1600	1100	6000	3550	2750
T-1	2242 to 2271	1400	710	5000	1100	1050	710	5000	2350	1800
T-8, 9	2161, 2174 and 2178	990	480	5000	790	720	480	5000	1650	1250
T-23	2301 to 2310	....	....	....	....	....	....	....	....	....
T-26	2283 to 2299	....	....	....	....	....	....	....	....	....
T-28, 31	2311 to 2362	....	....	....	....	....	....	....	....	....
T-32, 40	2363 to 2384	....	....	....	....	....	....	....	....	....
T-36	2103	1500	780	5000	1250	1100	780	5000	2500	1950
T-37	2105 and 2106	2250	950	6000	1500	1050	950	6000	3150	2400
T-57, 58	2385 and 2386	....	....	....	....	....	....	....	....	....
P-1, 3, 5	2408, 2411, 2412, 2413, 2416, 2417, 2418 2423, 2425 to 2435 2437 to 2452, 2459 and 2460	1800	880	6000	1450	1300	880	6000	3050	2300
P-1	2400, 2403 to 2407 and 2415	1850	920	6000	1500	1350	920	6000	3200	2450
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	1950	970	6000	1550	1450	970	6000	3350	2550
P-6	2453, 2454 and 2458	....	....	....	....	....	....	....	....	....
P-7	2476 and 2477	....	....	....	....	....	....	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483	....	....	....	....	....	....	....	....	....
P-8, 10	2475, 2484 to 2491	....	....	....	....	....	....	....	....	....
P-11	3100 to 3109	1950	970	8000	1550	1400	970	8000	3300	2500
P-12	3120 to 3129	....	....	....	....	....	....	....	....	....
C-5,8,9,10,26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469.	3000	1310	8000	2000	1400	1310	8000	4170	3220
C-15, 32	2500, 2505 to 2507	1600	820	5000	1300	1200	820	5000	2650	2050
C-17	2510 and 2511	1950	1050	6000	1600	1500	1050	6000	3250	2500
C-18	3400 to 3409	2300	1200	8000	1850	1700	1200	8000	3800	2950
C-19	3410 to 3426	2400	1250	8000	1950	1800	1250	8000	3950	3050
TW-1	2900 to 2913	1900	980	7000	1550	1400	980	7000	3150	2400
TW-2, 3	2932 to 2952	1950	850	7000	1300	900	850	7000	2700	2100
TW-4, 6	2926 to 2931 and 2957	1400	720	7000	1150	1050	720	7000	2400	1800
TW-8	2914 to 2923	2100	1050	7000	1700	1550	1050	7000	3500	2650
Allowance for Empty and Underloaded Cars	Less than 45 M's	6	6	6	6	6	6	6	6	6
	45 M's to 55 M's	3	3	3	3	3	3	3	3	3
	More than 55 M's	0	0	0	0	0	0	0	0	0

ENGINES FOR WHICH NO RATING IS SHOWN IN THE RATING OF ENGINES TABLE WILL NOT BE PERMITTED TO OPERATE IN THAT TERRITORY UNLESS AUTHORIZED BY SUPERINTENDENT

SPEED TABLE

SPEED PER HOUR	1 MILE IN MIN. SEC.	SPEED PER HOUR	1 MILE IN MIN. SEC.	SPEED PER HOUR	1 MILE IN MIN. SEC.	SPEED PER HOUR	1 MILE IN MIN. SEC.
6	10.00	25	2.24	39	1.33	53	1.08
8	7.30	26	2.18	40	1.30	54	1.06
10	6.00	27	2.13	41	1.27	55	1.05
12	5.00	28	2.08	42	1.25	56	1.04
15	4.00	29	2.04	43	1.23	57	1.03
16	3.45	30	2.00	44	1.21	58	1.02
17	3.31	31	1.56	45	1.20	59	1.01
18	3.20	32	1.52	46	1.18	60	1.00
19	3.09	33	1.49	47	1.16	61	.59
20	3.00	34	1.45	48	1.15	62	.58
21	2.51	35	1.42	49	1.13	63	.57
22	2.43	36	1.40	50	1.12	64	.56
23	2.36	37	1.37	51	1.10	65	.55
24	2.30	38	1.34	52	1.09		

SURGEONS

LOCATION	NAME	TITLE
San Francisco		Chief Surgeon
Yuma	Dr. W. A. Phillips	District Physician and Surgeon
Yuma	Dr. W. C. Cain	Asst. District Physician and Surgeon
Buckeye	Dr. G. C. Rubel	District Physician and Surgeon
Litchfield	Dr. R. L. Penn	District Physician and Surgeon
Phoenix	Dr. N. A. Ross	District Physician and Surgeon
Phoenix	Dr. J. E. Drane	Asst. Dist. Physician and Surgeon
Phoenix	Dr. R. H. Stevens	Asst. Dist. Physician and Surgeon
Phoenix	Dr. G. Robert Barfoot	Asst. Dist. Physician and Surgeon
Phoenix	Dr. Harry B. Gudgel	Asst. Dist. Physician and Surgeon
Phoenix	Dr. D. F. Harbridge	Oculist and Aurist
Phoenix	Dr. B. L. Melton	Aurist
Tempe	Dr. R. J. Stroud	District Physician and Surgeon
Chandler	Dr. J. M. Meason	District Physician and Surgeon
Chandler	Dr. A. G. Rice	Asst. Dist. Physician and Surgeon
Coolidge	Dr. G. H. Walker	Emergency Surgeon
Gilbert	Dr. L. M. Tompkins	Emergency Surgeon
Florence	Dr. G. E. Huffman	District Physician and Surgeon
Ray	Dr. O. E. Utzinger	District Physician and Surgeon
Hayden	Dr. C. B. Huestis	District Physician and Surgeon
Gila	Dr. M. H. Axline	District Physician and Surgeon
Casa Grande	Dr. J. E. Redden	District Physician and Surgeon
Tucson	Dr. C. A. Thomas	Asst. to Chief Surgeon and Examiner
Tucson	Dr. R. G. Dryer	District Physician and Surgeon
Tucson	Dr. R. F. Oyler	District Physician and Surgeon
Tucson	Dr. N. K. Thomas	Division Surgeon
Tucson	Dr. C. C. Whittle	Oculist and Aurist
Nogales	Dr. J. S. Gonzalez	District Physician and Surgeon
Nogales	Dr. C. S. Smith	Oculist and Aurist
Benson	Dr. A. N. Shoun	District Physician and Surgeon
Willcox	Dr. J. C. Wilson	District Physician and Surgeon
Willcox	Dr. B. E. Briscoe	District Physician and Surgeon
Bowie	Dr. F. W. Parrish	District Physician and Surgeon
Lordsburg	Dr. C. B. Austin	District Physician and Surgeon
Safford	Dr. J. N. Stratton	District Physician and Surgeon
Safford	Dr. F. W. Butler	Asst. Dist. Physician and Surgeon
Globe	Dr. C. Gunter	District Physician and Surgeon
Miami	Dr. C. M. Cron	District Physician and Surgeon
Miami	Dr. I. E. Harris	Asst. Dist. Physician and Surgeon
Miami	Dr. Wm. B. Watts, Jr.	Asst. Dist. Physician and Surgeon

HOSPITALS

General Hospital	San Francisco, Calif.
Division—St. Joseph's Hospital	Phoenix, Ariz.
Division—St. Mary's Hospital	Tucson, Ariz.
Emergency Hospital	Tucson, Ariz.
Emergency Hospital	Gila, Ariz.

TRAINMASTERS

V. E. ANDERSON	Yuma
B. B. KIMBALL	Yuma
J. C. SLADE	Tucson
W. G. CURRIER	Tucson
J. E. SCHWARTZ	Tucson
A. G. McMANUS	Phoenix
T. W. ROBY	Phoenix
B. C. BRADFORD	Bowie

ASSISTANT TRAINMASTERS

J. H. VERMILLION	Yuma
F. J. DEON	Gila
W. F. CURRIER	Gila
R. D. CHASTAIN	Gila
J. E. BUTLER, Jr.	Phoenix

ASSISTANT TRAINMASTER—DIVISION EXAMINER

B. M. BRAGDON	Tucson

ROAD FOREMEN OF ENGINES

C. A. BALL, Sr.	Tucson
R. A. MILLER	Tucson
F. R. BENTON	Yuma

ENGINEMEN INSTRUCTORS

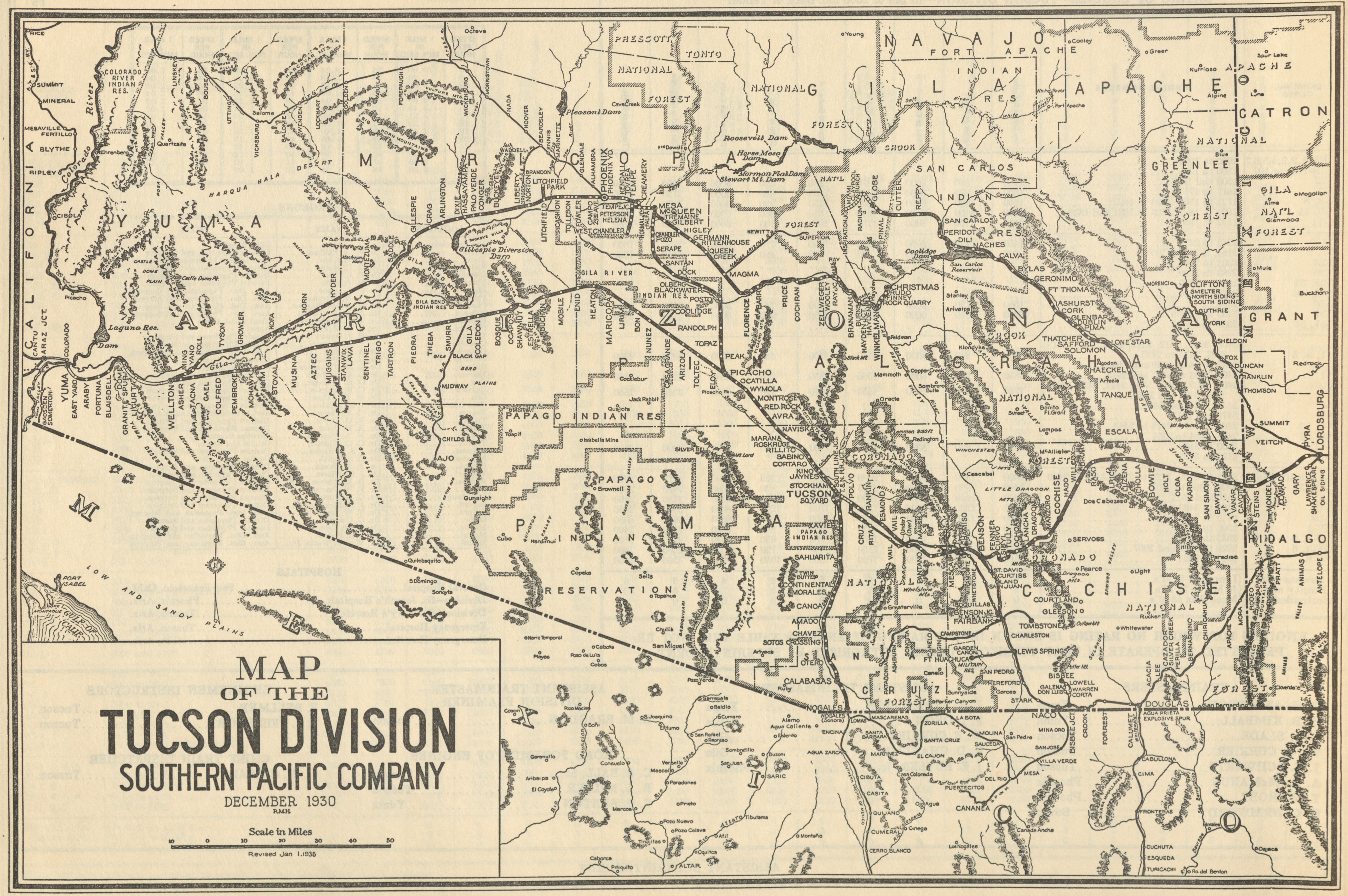
F. BELLMER	Tucson
J. E. PFERSDORF	Tucson

CHIEF TRAIN DISPATCHER

H. W. CASSADY	Tucson

ASSISTANT SUPERINTENDENT

B. S. SINES	Tucson


CALIFORNIA
ARIZONA
MEXICO
NEW MEXICO
YUMA
MARICOPA
PINAL
PIMA
SANTA CRUZ
COCHISE
GRAHAM
GREENLEE
GILA
NAVAJO
APACHE
CATRON
GRANT
HIDALGO
SONORA
PRESCOTT NATIONAL FOREST
TONTO NATIONAL FOREST
CROOK NAT'L FOREST
CORONADO NATIONAL FOREST
FORT APACHE INDIAN RES
SAN CARLOS INDIAN RES.
COLORADO RIVER INDIAN RES.
GILA RIVER INDIAN RES.
GILA BEND INDIAN RES
PAPAGO INDIAN RES
PAPAGO INDIAN RESERVATION
PAPAGO INDIAN RES
HARQUA HALA DESERT
LOW AND SANDY PLAINS
GULF OF CALIF.
PORT ISABEL
YUMA
WELLTON
GILA BEND
MARICOPA
PHOENIX
TEMPE
MESA
CHANDLER
FLORENCE
CASA GRANDE
PICACHO
RED ROCK
TUCSON
BENSON
FAIRBANK
TOMBSTONE
BISBEE
DOUGLAS
NOGALES
CALABASAS
WILLCOX
COCHISE
BOWIE
SAN SIMON
STEINS
LORDSBURG
CLIFTON
SAFFORD
GLOBE
MIAMI
RAY
WINKELMAN
HAYDEN JCT.
CHRISTMAS
SUPERIOR
MAGMA
AJO
GUNSIGHT
SELLS
CANANEA
NACO
CUMERAL
AGUA PRIETA
FRONTERAS
Roosevelt Dam
Coolidge Dam
San Carlos Reservoir
Gillespie Diversion Dam
Laguna Res.
Pleasant Dam
Horse Mesa Dam
Mormon Flat Dam
Steward Mt. Dam
Colorado River
Gila River
Salt River
San Pedro River
Santa Cruz River

MAP OF THE TUCSON DIVISION

SOUTHERN PACIFIC COMPANY

DECEMBER 1930

R.M.H.

Scale in Miles

10 0 10 20 30 40 50

Revised Jan 1. 1936